

AMERICAN VETERINARY REVIEW.

OCTOBER, 1903.

EDITORIAL.

EUROPEAN CHRONICLES.

PARIS, Aug. 20, 1903.

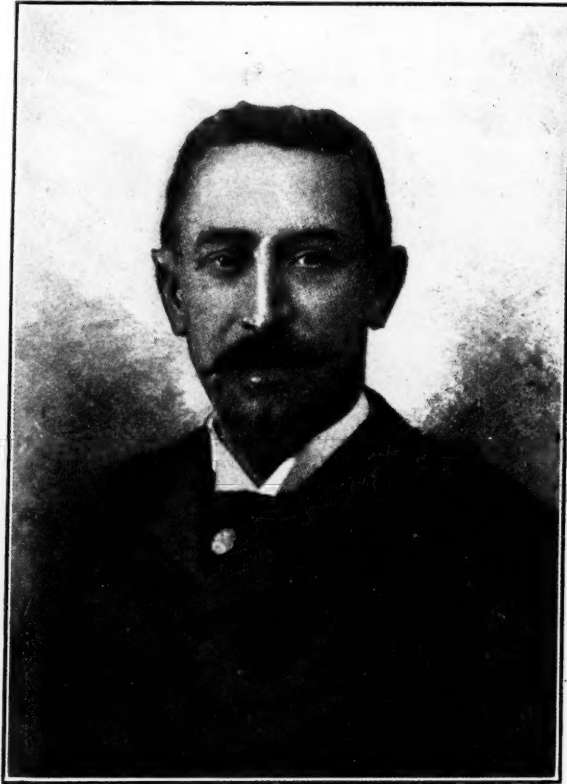
The subject of this chronicle will be sad, as it will record one of the greatest losses that the veterinary profession, science, France and the whole world have sustained.

PROF. E. NOCARD DIED THE SECOND OF THIS MONTH, at the age of fifty-three, when the many years he might have lived would have allowed him new efforts and new discoveries. Struck down in his full glory, suddenly, he was carried away in a few weeks by three successive attacks of disease, notwithstanding the best medical attendance and the filial attention of one of his students, Prof. Vallè, of Alfort. The last time I saw him, was at one of the meetings of the Société Centrale, where he filled the duties occupied so long by those worthy predecessors, Henri Bouley and Camille Leblanc, and a few days after I heard of his ailment. Then came news of great improvement, almost of convalescence, of his ability to write to his many anxious friends, to one of whom he said jokingly: "Anyhow it is pleasant to say to one's self, 'it is not yet for this time'";—and then came the fatal news.

The veterinary profession has lost one of its most illustrious members; science will mourn his death for some long time; his country will never regret him enough, and no doubt the

whole of humanity will suffer from the want of the energy which he was so lavishly exerting in its behalf.

Nocard leaves behind him an immense work, and the great example of a life full of labor, abnegation and honor, which has been devoted entirely to science. One of the first enthusiasts of the Pasteur theory of contagious diseases, when spontaneous de-



PROF. E. NOCARD.

velopment received its last blow, he soon found his place at the Pasteur Institute, where at his lectures veterinarians, physicians and biologists all over the world were found attentive and enthusiastic.

Nocard had indeed a passion for teaching, and there it may be said that he was a professor without an equal. "How pleasant it is to teach," he used to say, after a lecture where his stu-

dents, by their applause, had shown him their appreciation and their love. But it was not only as a teacher that Nocard's science could be appreciated; the series of conferences that he made for years on the use of tuberculin, of mallein, the numerous communications that he made, the famous discussions of the various congresses where he assisted and where he won so many laurels, all those are occasions where he almost always carried his point and made his name great.

Nocard, like Bouley, was a veterinarian above all. He loved his profession and loved his alma mater, where he remained to the last, and for which he fought on many occasions, and even to his own detriment. His death will certainly be a severe blow for his dear Alfort.

We became intimately acquainted with him during one of our European visits some years ago, and since then we had become friends. He often inquired about our profession in the States; he knew of our work in New York, and had followed it with interest, and he was always glad to put himself at the disposition of any American veterinarian who would come and ask him facts and information relating to the interesting work of his own. We know, however, that the same kindness will be offered by his successor, and we will always keep a most pleasant souvenir of him as a friend, as a man whose life's work has been so much in sympathy with ours.

* * *

The biography of Prof. Nocard will be written in a few lines:—

Born the 29th of January, 1850, he received the degree of *bachelor es lettres* in a school of his native town, and while making his military service took a liking to the veterinary profession. After the Franco-German war he entered Alfort and graduated in 1873 with the greatest honors and carried off the prizes. Two months later he was appointed assistant to the Chair of Clinic after a most successful competition.

Five years later, he entered into another for the Chair of Surgical Pathology and Clinic, which had just been created.

He was victorious and was appointed professor November 25, 1878.

In 1883, with Roux, Strauss and Thuillier, he was selected by Pasteur to go to Egypt and study cholera. When he returned he was decorated chevalier of the legion d'honneur.

In 1887 he was named director of the Alfort school, to take the place of Goubaux ; he gave up the Chair of Clinic for that of Contagious Diseases.

January 3, 1891, he gave up the directorship, and was promoted to the rank of officer of the legion d'honneur.

Notwithstanding the hardship of his department, as teacher, and in his investigations, he found time to fulfil the duties imposed by the government of France or other countries ; he was a member of many societies ; attended all congresses and would scarcely spare a moment for himself. He was made of iron ; stood all kinds of work ; but every effort has its limit. Lately, while on a mission to Algeria, he contracted a severe attack of diphtheria ; his health was much shaken ; he thought somewhat of taking a rest ; too late. One day he was taken ill in a tramway by an attack of angina pectoralis. After a few days he seemed better, but a relapse occurred, and the frightful event took place after most painful agony.

Nocard belonged to many societies : He was a member of the Academy of Medicine, of the Society of Biology, of the Committee of Hygiene, of the Consulting Committee of Epizoötics, of the Royal Society of England, etc., etc., and honorary member of the American Veterinary Medical Association. He was decorated by several orders in France, Belgium and Italy. His scientific works and publications are too numerous to be recalled here, but the most important one is the one which he published with Prof. Leclainche, " les Maladies Microbiennes."

* * *

The funeral of my friend Nocard took place at St. Maurice, a charming little town on the borders of the river Marne.

More than three thousand persons were around the house where the professor laid. Civilians and military veterinarians

had gathered in mass to pay a last duty to one they had loved, to one who after a long service to the profession was now at rest. It was the time of vacations and many were absent; still they had come from almost everywhere and faces were seen which belong to almost the four cardinal points of France, while among the representatives of the French societies to which Nocard belonged could also be observed delegates from the Bacteriologic Institute of Geneva, the Director of the Veterinary School of Bruxelles, the Hygienic Institute of Berlin, etc.

Somewhat after 11 o'clock the body was brought out of the house, placed in the hearse and the cortege started, following the two wagons in which had been placed all the crowns and flowers brought or sent there by the friends of the deceased; there were among the immense number several which attracted specially my attention by their simplicity—they were from little out-of-the-way veterinary organizations, I suppose, which came there to tell of their sorrows. But if there were many crowns, from French bodies, foreign countries had also sent their farewell gifts, and as tributes I found represented the School of Bruxelles, the Hygienic Institute of Prof. Ostertag of Berlin, that of Prof. Ehrlich of Frankfort, the veterinarians of Varsovy, etc. Slowly the cortege followed to the small church of the town and then to the cemetery, which, situated on the top of a stiff hill, seemed to be the basis of the pedestal of the statue which will no doubt be erected to the memory of our departed friend.

Many were the speeches made on the grave—some fourteen or fifteen in number—retracing the life of the deceased, by Mr. Chauveau, the General Inspector of the Veterinary Schools, by Mr. Barrier, director of Alfort, by Dr. Roux of Pasteur Institute, etc., etc.,—and finally by Prof. Lignières, one of his preferred students, who addressed the farewell address of all those who had known and loved the great teacher of Alfort.

And then I departed. I have seen many funerals in our profession; but this was the most imposing and the most sol-

emn ; and the emotion shown by all present told how much Nocard was loved.

A. L.

THE SEPTEMBER VETERINARY CONVENTIONS.

Many of the largest veterinary associations of the country held their annual meetings last month, and the REVIEW's pages fairly shriek under the burden of their stories. It is not a groan of disappointment, however, for in very many respects they were far in advance of all similar events in American associational history. The REVIEW's burden is one of magnitude, and the sound emitted is one of exultation and pride, for it is glad that the occasion has arisen to give its readers so much depicting widespread interest at the foundation of our veterinary institution, and it is glad that it has the opportunity and the facilities to spread the news to the world.

We have no intention of conveying an impression that in the conduct of these meetings there were not mistakes (both of omission and of commission), and that in our judgment these errors should receive as full consideration as those which excite our admiration and our praise ; but in this number space will permit only of the chronicling of the salient features of the events that transpired, together with the publication of some of the chief papers and reports presented. In later issues we hope to publish the best of the papers submitted, and to offer some suggestions which in our humble judgment will make these yearly gatherings more profitable to the profession. We believe that they are not above serious, honest criticism ; that a thorough appreciation of these shortcomings can but add to the value of future meetings. At the same time, the REVIEW has no wish to play the rôle of censor of what should be done and what had best be left undone. It would very much prefer to be the medium through which the profession as a whole can discuss its own frailties. It accordingly invites the members of these organizations to the free use of its wide pages, trusting that in the aggregation of judgment good will flow for the common weal.

BOVINE TUBERCULOSIS IS TRANSMISSIBLE TO MAN.

Just two years ago last month the REVIEW published the remarkable paper of Prof. Koch, read before the London Congress on Tuberculosis, in which he maintained the non-transmissibility of tuberculosis of cattle to human beings. That communication, coming from such high authority, necessarily commanded world-wide attention; but his conclusions, in direct opposition to the position of the veterinary profession, and to the views which the German professor himself had persistently given utterance to, were such as to cause more of consternation than of any other feeling. At that time the REVIEW merely published the paper in full with the comment that it was possibly fortunate for the world, as the mooted question would undergo such a thorough investigation that the truth or fallacy of Prof. Koch's assertions would be settled for all time. We had in mind then our own Bureau of Animal Industry, which we felt could be relied upon to leave no stone unturned to confirm or disprove a problem the truth of which meant so much to the commercial world and the cause of humanity. As usual, the Bureau rose to the occasion, and has carried the investigation of the problem as far as it can possibly be taken without direct experimentation upon the living human subject.

At the Ottawa meeting of the American Veterinary Medical Association the distinguished Chief of the Bureau of Animal Industry, Dr. D. E. Salmon, presented the results of the series of experiments conducted by his staff of investigators, together with an argumentative reply to the statements made by Koch, which produced a profound impression upon all who heard him.

In another part of this number of the REVIEW, the full text of the paper by Dr. Salmon is published, and we call the attention of the veterinary profession to it as a full and complete vindication of the position which it has consistently and unswervingly maintained in relation to this all-important question.

ORIGINAL ARTICLES.

BOVINE AND HUMAN TUBERCULOSIS.

BY D. E. SALMON, D. V. M., CHIEF OF THE BUREAU OF ANIMAL
INDUSTRY, WASHINGTON, D. C.

Presented at the Meeting of the American Veterinary Medical Association, Ottawa, Canada,
September, 1903.

The prevention of tuberculosis in the human subject has been for years and still is one of the most interesting and important questions confronting the sanitarian. There have been many differences of opinion; many cases in which the same facts have been interpreted in different ways; and much discussion and divergence of views as to what actually are the facts.

After the publication of the results of the investigations of Villemin, Chauveau and Gerlach in 1866, '68 and '69, which demonstrated the communicability of tuberculosis, veterinarians looked upon bovine tuberculosis as a communicable disease and were inclined to consider it as identical with human tuberculosis. Their clinical experience, in stables where the disease clearly was introduced by a purchased animal and spread from beast to beast until the greater part of the herd was affected, confirmed the conclusions of these investigators, and it appeared to them further that there was often a remarkable coincidence between the use of milk from tuberculous cows and the development of the disease in mankind.

These views, however, did not gain much standing in the medical profession. The opinion of the great majority of physicians that tuberculosis was an hereditary disease was too deeply rooted to be dislodged except by the most overwhelming array of facts inconsistent with it. Koch's discovery of the tubercle bacillus in 1882, taken in connection with the experiments showing the transmissibility of the disease, brought a complete revolution of the medical mind with reference to its causation and prevention, and seemed to establish the essential

identity of the tuberculosis of various species of animals with each other and with that of the human race.

New doubts arose, however, when in 1889 and 1890 Rivolta and Maffucci showed that there were very marked differences between human and avian tuberculosis. Theobald Smith's papers published in 1896 and 1898 demonstrating marked differences between a bacillus from the nasua and one of bovine origin, and between bacilli from human and bovine sources, recalled similar observations which had been made by Villemin, Pütz, and Sidney Martin, and aroused renewed interest in the study of varieties of this bacillus and the significance which might be attached to them. In 1897 and 1898 Dubard published papers on tuberculosis in cold-blooded animals showing that the bacillus in this disease had varied in an extraordinary degree from the human type.

Notwithstanding the extreme divergence in biological characters between the avian, the piscine and the mammalian types of bacilli, investigators concluded that they were essentially the same and that the avian might be changed into the mammalian and the mammalian into the piscine types by suitable modification of the environment. If, therefore, the avian bacillus could be made to produce tuberculosis in mammals, and the mammalian bacillus to produce this disease in fishes and frogs, there appeared no reason to doubt that the bovine bacillus could produce tuberculosis in man, since the human and bovine bacilli resemble each other much more closely than do the avian and mammalian or the mammalian and piscine forms.

This, briefly, was the condition of our knowledge of the question when in 1901 Koch read his memorable paper before the British Congress on Tuberculosis. In that paper he said: "I feel justified in maintaining that human tuberculosis differs from bovine, and cannot be transmitted to cattle." Concerning the transmission of bovine tuberculosis to man, he admitted that it was impossible to give this question a direct answer, because the experimental investigation of it with human beings was out of the question. He said, however: "It is well known

that the milk and butter consumed in great cities very often contain large quantities of the bacilli of bovine tuberculosis in a living condition," and if these bacilli "were able to infect human beings, many cases of tuberculosis caused by the consumption of alimenta containing tubercle bacilli could not but occur among the inhabitants of great cities, especially the children." He concluded that "in reality, however, it is not so." The only facts which he cited in support of this remarkable conclusion were some selected post-mortem statistics which indicated that primary tuberculosis of the intestine was an extremely rare disease. He expressed an important assumption as follows: "That a case of tuberculosis has been caused by alimenta can be assumed with certainty only when the intestine suffers first." But he did not admit that all such cases are caused by bacilli ingested with the food. "It is just as likely," he said, "that they were caused by the widely propagated bacilli of human tuberculosis, which may have got into the digestive canal in some way or other—for instance, by swallowing saliva of the mouth." He said we may determine from which source the infection occurred by inoculating cattle with a pure culture of the bacilli found in the tubercular material, and for this purpose he recommended subcutaneous injection, which he said "yields quite specially characteristic and convincing results."

He reported that he had experimented upon nineteen head of cattle by infecting them in various ways with pure cultures of tubercle bacilli taken from cases of human tuberculosis or with sputum from consumptive patients. In some cases the tubercle bacilli or the sputum were injected under the skin, in others into the peritoneal cavity, in others into the jugular vein. Six animals were fed with tubercular sputum almost daily for seven or eight months; four repeatedly inhaled great quantities of the bacilli, distributed in water and scattered in the form of spray. None of these cattle showed any symptoms of the disease, and no trace of tuberculosis was found in their internal organs. The animals were absolutely insusceptible to these bacilli. An almost equally striking distinction between

human and bovine tuberculosis was brought to light by feeding swine with tubercular sputum and by injecting tubercle bacilli into the vascular systems of asses, sheep and goats. In all these experiments bovine material was used upon similar animals for comparison.

These experiments would be quite convincing as to the harmlessness of tubercle bacilli from man for these various animals, were it not for the fact that it has been shown there are great variations of virulence in tubercle bacilli from different human subjects. Vagedes, working under Koch's direction, had shown this three years before the paper was read at London, and yet Koch gives no hint of this, nor does he admit the least suspicion that there might be different results with different infective material.

Perhaps the most astonishing statement made by Koch in his London paper is found in the following sentence: "If one studies the older literature of the subject, and collates the reports of the numerous experiments that were made in former times by Chauveau, Guenther and Harms, Bollinger, and others, who fed calves, swine, and goats with tubercular material, one finds that the animals that were fed with the milk and pieces of the lungs of tubercular cattle always fell ill of tuberculosis, whereas those that received human material with their food did not."

Now, the fact is, Chauveau, in a remarkable series of experiments, did infect cattle with human tubercular material and obtained just as serious results as with bovine material. His conclusion was that the human tubercular virus acts on the bovine species exactly like the tubercular virus which comes from the bovine species itself. Bollinger inoculated a young calf in the peritoneal cavity with material from a human lung. When killed at the end of seven months the mesentery and peritoneal covering of the spleen presented a number of tumors from the size of a pea to that of a walnut, which microscopically were identical with those found in pearly disease under natural conditions. The retroperitoneal and mesenteric glands were tuber-

culous also. The paper of Guenther and Harms upon this subject I have not been able to consult, nor have I seen any satisfactory summary of it. At least two out of three of the older experimenters cited by Koch had therefore obtained positive results by inoculating cattle with human tubercular material.

Koch was equally inexact in his citations concerning his own previous declaration on this subject. He said: "Even in my first circumstantial publication on the etiology of tuberculosis I expressed myself regarding the identity of human tuberculosis and bovine tuberculosis with reserve." What he really said in that paper was this: "Bovine tuberculosis is identical with human tuberculosis and therefore a disease transmissible to man. * * * However great or small may be the danger which results from the consumption of meat or milk affected with bovine tuberculosis, it is present and must therefore be avoided."

In the period which has elapsed since the London Congress, a period of less than two years, a considerable number of investigators have had positive results in the inoculation of cattle with tubercular material from the human subject and with pure cultures of tubercle bacilli from the same source. Among these may be cited Ravenel and de Schweinitz in this country, and Thomassen, de Jong, Delepine, Orth, Stenstrom, Fibiger and Jensen, Max Wolff, Nocard, Arloing, Behring, Hamilton and Young, and Dean and Todd. Some of these and other investigators have also produced the disease in sheep, goats and swine by infection in various ways with human tuberculosis. As the animals named were refractory in Koch's experiments, the success of various experimenters with them is quite significant.

In the Bureau of Animal Industry two distinct lines of experiments have been carried on, in order that one might be checked up against the other. De Schweinitz, in the Biochemic Division, has isolated nine cultures from human tuberculosis. Two of these were derived from human sputum, three from cases of generalized tuberculosis in adults, and four from cases of generalized tuberculosis in children. These cultures were

compared with a newly isolated virulent culture of bovine tuberculosis, and among them two of the cultures from children were found to be identical in their cultural and morphological characters with the bovine bacillus. They also killed rabbits and guinea pigs in as short a time as did the bovine bacillus. Hogs inoculated subcutaneously with these two cultures from children died of generalized tuberculosis. Two calves, weighing over 300 pounds each, developed a generalized tuberculosis after a subcutaneous inoculation with these virulent human cultures, and a yearling heifer inoculated with one of them showed generalized tuberculosis when killed three months after inoculation. Both the cattle and the hogs had been tested with tuberculin and found to be free from tuberculosis before the inoculations were made. It will be observed that 50 per cent. of the cultures obtained from children were virulent for cattle.

Mohler, working in the Pathological Division, has obtained three very virulent tubercle bacilli from the human subject. A goat inoculated subcutaneously with a culture of one of these died in 37 days with miliary tuberculosis of the lungs involving the axillary and prescapular glands. This bacillus was obtained from the mesenteric gland of a boy. Of still greater interest is a bacillus isolated by Mohler from human sputum. A goat inoculated subcutaneously with a culture of this germ died in 95 days of pulmonary tuberculosis. A cat inoculated in the same manner died in 23 days of generalized tuberculosis. A rabbit similarly inoculated died in 59 days of pulmonary tuberculosis. A rabbit inoculated with a bovine germ for comparison lived 10 days longer than the one inoculated with this sputum germ.

It is plain from these experiments that there is a great difference in the virulence of tubercle bacilli from human sources, and that while some of these are not capable of producing serious disease in cattle, sheep, goats and swine, there are others which produce generalized lesions and are very fatal with such animals.

Having disposed of the argument that human tuberculosis is

not transmissible to animals, let us briefly consider the other proposition, viz., that bovine tuberculosis is not transmissible to man.

The proportion of cases in which the primary lesion is in the intestine is a very poor criterion from which to judge the proportion of cases caused by ingestion of the bacilli with the food. With experimental animals in which the disease has been produced by feeding tubercular material we very frequently fail to find any lesions in the intestines, and we find the oldest lesions in the mesenteric glands, the liver, spleen, kidneys, or perhaps in the lungs. Koch tells us that in his experimental swine fed with the tubercular sputum of consumptive patients no trace of tuberculosis was found, except here and there little nodules in the lymphatic glands of the neck, and in one case a few grey nodules in the lungs. With these results before his eyes how could he consistently claim that we must find primary lesions of the intestine in all cases of ingestion tuberculosis? With pigs particularly, but probably with all animals to a certain extent, the tubercle bacilli taken with the food may penetrate the walls of the pharynx and advancing down the neck gain entrance to the lungs. The same method of infection has been repeatedly noted with children. Again, it has been shown by the experiments of Desoubry and Porcher and those of Nicholas and Descos that various kinds of bacteria, including tubercle bacilli, may penetrate the intestine, without causing any local lesion, and pass directly into the chyle vessels and from these into the blood whenever milk or fat constitutes a considerable proportion of the food.

These facts being admitted, it is absurd to hunt through the statistics for primary lesions of the intestine as an argument for or against infection with bovine tuberculosis. In the hospital statistics of Great Britain we find a considerable proportion of cases with children, 25 to 30 per cent., in which there are primary lesions of the intestine. In other countries such cases are quite rare. Heller has recently made 714 post-mortems of children who had died of diphtheria, and among these found 140 who had an associated affection of tuberculosis in various or-

gans.
losis,
intes
It wo
dant

T
a cas
of th
intes
huma
The
isolat
these
This
the s
have
effect
dome
which
pletel
sary t
in the

Y
bacill
orator
diseas
with
most
those
bercu
these
and b
the b
theory
bacill
isfacto

gans. Only 1.43 per cent. showed primary intestinal tuberculosis, but in 37.8 per cent. the primary lesion was in either the intestine, the mesenteric glands, or in other abdominal organs. It would appear, therefore, that even in Germany there is abundant evidence of ingestion tuberculosis.

This brings us to the question as to how we can tell whether a case of tuberculosis which is evidently caused by penetration of the bacilli through the walls of the pharynx or those of the intestine is due to bovine bacilli taken with the food or to human bacilli which have been swallowed with the saliva, etc. The test that Smith and Koch have laid down is that we should isolate the bacilli and by the inoculation of cattle show that these bacilli have the virulence of the known bovine bacillus. This résumé of the condition of the experimental knowledge of the subject makes clear the importance of such experiments as have been made in the Bureau of Animal Industry to show the effect of bacilli from the human subject upon the principal domesticated animals. These experiments aid in filling a gap which it was necessary to bridge before we could fully and completely answer the arguments of those who believe it is unnecessary to consider the existence of bovine tuberculosis as a factor in the control of human tuberculosis.

You will observe that de Schweinitz has isolated tubercle bacilli from human lesions which when cultivated in the laboratory are of the bovine type, and that he has produced fatal disease in bovine animals by inoculating them subcutaneously with cultures of these bacilli. That is, he has fulfilled the most difficult requirements as to experimental work which those who oppose the theory of the transmission of bovine tuberculosis to man have been able to formulate. The results of these experiments make it necessary to admit either that human and bovine tuberculosis are identical, or that, being different, the bovine form is transmissible to man. There is no third theory by which the presence in human lesions of tubercle bacilli having the characteristics of the bovine type can be satisfactorily explained.

From the standpoint of experimental medicine, the evidence which has been brought forward should be sufficient to settle the question of the transmission of bovine tuberculosis to man. Koch plainly said in his London address that all that was necessary to decide with certainty whether the tuberculosis of the intestine was of human or of animal origin was to cultivate in pure culture the tubercle bacilli found in the tubercular material and to inoculate cattle with them. In his latest address on this subject, which was made at the International Conference on Tuberculosis at Berlin, he practically abandoned the discussion from the experimental standpoint and devoted his time to a discussion of clinical evidence. As might be expected, he found none of the cases of supposed transmission of bovine tuberculosis to the human subject to be entirely free from the possibility of criticism. He seemed to forget that if demonstrations could be so easily made from clinical observations it would be unnecessary to devote so much time and expense to experimentation.

In the address mentioned he laid down a set of conditions which must be fulfilled to make clinical evidence convincing. Briefly, these are as follows :

1. Certain proof of tubercle, and where possible the primary focus must be supplied. (To this condition the only objection is that the primary focus, which is made so much of, is of little value in determining the origin of the infection, for the reasons already given.)

2. Other sources of infection must be excluded with certainty. (This condition absolutely excludes all clinical evidence bearing upon the subject of tubercular infection. How is it possible to prove that any given individual has not been exposed to the bacilli of human tuberculosis? He tells us that the main source of the infection of tuberculosis is the sputum of consumptive patients. We are all inclined to admit this; but suppose we try to get such clinical evidence in favor of this proposition as he asks for in regard to bovine infection, where are the cases recorded? You say a certain person who has re-

cently contracted consumption had habitually been in a room with another consumptive patient and was infected by that patient. Very well; but how can you prove that that person never ate any tuberculous meat, never partook of any tuberculous milk, never ate any butter containing the tubercle bacillus, never had an opportunity to be indirectly infected from the hands of cooks or from table utensils which had been in contact with tuberculous meat, milk or butter, and was never exposed to the infection scattered in so many ways by tuberculous animals? Can you exclude with certainty all these sources of infection? Certainly not; the thing is impossible. Now what becomes of the evidence upon which Koch bases the assertion that the main source of the infection in man is the sputum of consumptive patients? Surely he should be willing to try the clinical evidence bearing upon this point by the same requirements which he demands for the clinical evidence by which we endeavor to establish infection from bovine sources.)

3. In each case of alleged infection from milk affected with "Perlsucht" the condition of the rest of the people who have taken the same milk should be borne in mind. These fellow consumers form to a certain extent a control experiment, and if of the numerous people who have drunk the suspected milk only a single one sickens, this weighs decidedly against the belief that this one person was infected by the common food. (Suppose we apply this principle to our clinical case of alleged sputum infection, what is the result? Are there not scores of people exposed to many consumptives without contracting the disease? Are not the most of us exposed scores of times to consumptives without having contracted the disease? And yet, how erroneous it would be to exclude clinical evidence suggesting contagion because only one of those exposed to a certain consumptive had contracted the malady.)

4. The source of the milk should be attended to. Since in recent years it has become more and more evident that milk containing tubercle bacilli is yielded only by such cows as suffer from tuberculosis of the udders, the general statement that

some one has drunk milk from a cow suffering from Perlsucht no longer suffices to prove to us that Perlsucht bacilli have really reached his digestive organs. It must be milk from a cow with tuberculosis of the udder, and therefore a statement on this subject should not be wanting in a report on milk infection if it is said to be complete. (This argument is antiquated, since it has been proved again and again that the milk of tuberculous cows often contains tubercle bacilli when no lesions of the udder can be discovered. Of the many experiments that have been made to determine the proportion of tuberculous cows which yield infectious milk, the average results are about 15 per cent., while the cases with tuberculosis of the udder are not over two or three per cent. It is not necessary to comment further on these requirements.)

Koch advances another line of argument which I have heard elsewhere and which appears to me most misleading. He says: "We cannot but expect that if tuberculous infection through partaking of meat and milk infected with Perlsucht really occurs as frequently as is asserted, direct observation must make this obvious." He then recalls the so-called cases of meat poisoning, and cases of illness resulting from the use of the flesh of animals which had suffered from splenic fever, also to the distribution of typhoid infection through milk. "It is," he alleges, "extraordinarily characteristic of all these outbreaks that they do not occur as isolated illnesses, but in groups and often in epidemics. This could scarcely be otherwise, for the milk of a cow, the flesh of a sick animal, is practically always partaken of by several, and often by a great many people at the same time, who will be infected and fall ill, certainly not as a whole, but on a larger or smaller percentage. * * * A tuberculous infection must also take shape in the same way if tubercle bacilli which are virulent for man are found in meat or milk."

The fallacy of this argument lies in the difference in the illnesses referred to, and in the conditions of exposure. The opportunities for contracting the illness known as meat poisoning, or that of splenic fever, are extremely rare, and it may reason-

ably be assumed when a group of such cases occur at the same time and near together that they are of common origin. Moreover, the period of incubation in these diseases is very short, and the symptoms are striking and serious from the beginning of the illness. Attention is immediately attracted to them. It is the very opposite with tuberculosis. There are opportunities everywhere of contracting it; there may be a dozen cases in the same town, and yet if the individuals are not in the same family, no one thinks of a common origin. Then the period of incubation is so long and the access of the disease is so mild that it does not attract attention until so long a time has elapsed that the incidents which occurred at the time of infection have faded from the mind and can no more be recalled. Finally, the time which passes between infection and the appearance of marked symptoms of the disease varies so much with different individuals that if infection occurred at the same time with a number of persons, the disease would not appear so simultaneously as to attract special attention, as it does in meat poisoning or in splenic fever infection. The comparison with the distribution of typhoid fever infection through milk is a better one, but the difficulty of tracing this infection in a community where the disease is common and the sources of the contagion numerous may I think be appreciated by all. But typhoid infection must as a rule be much more easily traced than tubercular infection, because the sources of the contagion are not so numerous nor widely distributed, the incubation is shorter, and the symptoms are more serious at the beginning. On the other hand, so much of the milk and butter sent to market is infected with tubercle bacilli, and we consume these food products from so many different sources, that practically every one must take bovine bacilli into his digestive organs, not once only but many times. Now, when the disease develops, even if we prove by the characteristics of the bacilli that it has been caused by germs of bovine origin, how can any one point with certainty to this milk or this butter, consumed weeks or months before, and say that it was the cause of the infection?

Take, if you please, the average citizen who travels from place to place, passing his nights in sleeping cars under possibly infected blankets, or in hotel rooms of the history of which he knows nothing, who drinks at the fountains out of the common drinking cups, who must necessarily come into close contact with many consumptives, who inhales dried sputum on the streets. If he becomes infected, can you point with certainty to the source of his infection? Certainly not; nor can you point out groups of patients who have been infected by one and the same consumptive person, although many individuals were exposed to that person. If this cannot be done in the case of infection from human sources, how can we expect it to be done with infection through meat, milk, and butter?

We can only hope to get fairly satisfactory evidence as to the source of infection in the case of young children who have been in one house during their whole lives and who have not come into contact with any tuberculous persons. But in most cases, it would appear from the present condition of our knowledge that the virulence of the bacilli for cattle will be the best evidence of the source of the infection; that is, whether it comes from man or from the lower animals. The experimental proofs of tubercle bacilli in human lesions, having all the virulence of the bovine bacillus, are incontestable, and should cause sanitarians to take adequate precautions against infection through the products of diseased animals. The frequency of infection from animal sources can only be determined by long and careful investigation, but we do know how common the disease is with cows, how often the bacilli are found in the milk, and how frequently tuberculosis attacks children at the milk-drinking age.

Very recently (July, 1903) Kossel has given some of the results of the investigations of the German Tuberculosis Commission. This Commission has studied and tested the virulence of 39 different fresh cultures of bacilli from human tuberculosis. Twenty-three of these cultures were from adults and 16 from children. Among the 16 cultures from children 4 were virulent for cattle. Two of these were cases of primary tuberculosis of

the digestive organs, and two others were miliary tuberculosis. Kossel states that while these cultures were not as virulent as the most virulent cultures of the tuberculosis of animals, they were much more virulent than the weaker cultures of cattle tuberculosis. It is plain, therefore, that these cultures were of about the same virulence as the average bovine tuberculosis, and that this Commission, working according to the principles laid down by Koch, has found 25 per cent. of the cases of tuberculosis in children investigated by them to have been caused by infection with bovine tuberculosis. Whether this is a greater or smaller proportion than some have believed is of little consequence. The figures are definite, and to most of us it would be astounding if it should be found that they are of general application. The danger from bovine tuberculosis can no longer be doubted; and whether it is found that 25 per cent. of the cases of tuberculosis in children, or a greater or smaller proportion, are due to infection from animal sources, it is plain that the proportion is sufficiently high to make the prevention of such infection a matter of the greatest importance.

THE ILLINOIS STATE VETERINARY MEDICAL ASSOCIATION will hold its annual meeting at the Sherman House, Chicago, Dec. 2 and 3, 1903. Dr. W. H. Welch, Secretary, Lexington, Ill., writes the REVIEW, under date of Sept. 25, that good headway has already been made toward securing a good programme. The meeting being held the same week as the Fat Stock Show assures a large attendance. He says: "It is confidently hoped that Dr. D. E. Salmon, Chief of the Bureau of Animal Industry, will be with us and will deliver an address. We have positive assurance that Dr. A. S. Alexander, of the Wisconsin University, will read a paper before our Association. We hope to make this the banner meeting of recent years." The great State of Illinois, with its large number of graduate veterinarians, should have a splendid meeting this year; and, convening in the second largest city in America, with its immense live stock interests, its two veterinary colleges, its large quota of men engaged in inspection and other work for the Bureau of Animal Industry, there should only be a dearth of time in which to crowd into the programme the events of great value that lie at the door of the meeting.

VETERINARY DENTISTRY.

BY W. J. MARTIN, V. S., KANKAKEE, ILLINOIS.

Veterinary dentistry is an important branch in the practice of veterinary surgery and every practitioner should devote careful study to it. He should thoroughly familiarize himself with the anatomy and physiology of the various regions of the head and mouth, and be well grounded in the dentition of the various species of animals which he is most commonly called upon to treat. He should also be adept in the proper methods of handling animals, during the performance of dental operations, in order to avoid unfavorable criticism from owners or bystanders. All unnecessary rudeness in the handling of animals, as well as loud talking or boisterous actions on the part of onlookers, should not be permitted by the practitioner, while performing dental operations.

But a few years ago, it was generally supposed that domestic animals were not subject to the various diseases of the teeth that afflicted the human species, consequently but little attention, *if any*, was paid to this branch of pathology by the regular veterinary practitioner, and hence it was given over almost entirely to a class of so-called "veterinary dentists" or rather "fakirs," entirely devoid of skill in the practice of veterinary dentistry and of a conscience as well, but whose strong forte was in duping unwary horse-owners, charging extortionate prices for their "work" and as often inflicting serious injuries upon the mouths of horses who were so unfortunate as to fall into their clutches.

This unhappy state of affairs was largely due to the then existing veterinary institutions of learning, who gave no regular course of instruction in veterinary dentistry to their students. All this is now changed, and at the present time the importance of the study and practical operations connected with veterinary dentistry is recognized in all our leading veterinary schools, who now have regular graded courses of instruction in this study—requiring their students to become proficient not only in

the theory, but the practical details of the science, as well, likely to be met with in actual practice.

As practitioners we should make it our business to carefully examine the mouths of horses placed under our care that are suffering from some obscure ailment, the diagnosis of which it is difficult to make clear, and which in many instances, may be traced directly to some derangement in the organs of dentition. We should also at every opportunity impress on the mind of horse-owners the importance of keeping a careful watch over the teeth of their animals, both young and old. I have often seen the throats of horses severely blistered, because they were unable to properly masticate their food and the owners were under the impression that the animals were suffering from some form of catarrhal fever, when the true cause was due to a partly displaced deciduous molar lacerating the animals tongue. I call to mind a young draft Clyde stallion which I found to be suffering from a very serious attack of glossitis due to this cause, and which was promptly relieved by the removal of the offending molar.

It is not my intention in this paper to enter into any elaborate description of the many surgical operations which are necessary in the practice of veterinary dentistry, because each one of you have your own methods of performing those in ways probably superior to anything I could possibly recommend. It is of a few of the many practical details of which I wish to speak.

Grinding Capacity of Teeth.—Viewed as a whole, the mouth of a horse can be compared to nothing so much as a beautiful milling apparatus. Herein is the food crushed and finely ground that is to sustain life, and the more thoroughly this is performed before passing into the stomach, the better nourished and sustained will be the animal body. Now, it is a well-established fact in milling mechanics, that any defect, however slight, in the grinding apparatus of a flour mill, has a correspondingly ill effect on the quality of the flour turned out. It is the same with a horse's teeth. Any defect in these is quickly

made manifest by the ill effects upon the animal economy. Hence, the importance of the veterinarian keeping careful watch over this part of the equine machine.

Number of Teeth in the Horse.—As you all know, the male equine possesses 40 normal teeth—viz. : 24 molars, 12 incisors, and 4 canine or tusk teeth, or, as they are sometimes called, the “bridle” teeth. The female equine has 36 normal teeth, though sometimes we find the canine teeth present in them also. It is said by authors that the canine teeth are only present in the female when aged, but this is not by any means correct, as only a few days ago I examined a colt’s mouth not yet three years old, and she had a set of small but well-developed canine teeth.

The aboriginal ancestors of our present breed of horses had 44 permanent teeth, viz. : 28 molars, 12 incisors, and 4 canine teeth, present in both the male and female animals. Owing to the process of evolution due to the gradual change in their environment, the extra molars of hipparion have long been extinct, or exist only as vestigial remnants in our present race of horses; when such do exist, they are termed by anatomists extra or supplementary molars, and by the laity are called “wolf teeth.” These little vestigial teeth are often the bugaboo of horse-owners, who think that they have a deleterious effect on the eyes, even to the extent of causing animals that have them to go blind. But I can assure you that these teeth have no more to do with causing disease of the eyes than has the moon in her revolutions around the earth.

The Molar Teeth.—The molar teeth, as we have seen, number 24, six in each side of the jaws. The molars of the upper jaws are wider and stronger than are the lower ones, and thus overlap these. “Instead of coming in contact by level surfaces, the molars meet by inclined planes, and in such a way that the internal border is higher than the external in the inferior molars, while the opposite is the case in the superior.”—(Chauveau). To this arrangement of the molar teeth is due the powerful crushing and grinding power which they possess

in the lateral motion derived from the action of the powerful masseter muscles of the jaws. This lateral or crushing motion can only take place when the teeth are separated and then brought together against the inclined surfaces in reversed order in the upper and lower jaws.

It is due to this lateral or sweeping motion that we find the upper molars worn away on their internal border, with a corresponding elongation of the borders of the external surfaces. This wear is exactly reversed in the lower jaw, but the wear does not appear to be so rapid or extensive in the lower as in the upper molars, and hence these teeth require the attention of the veterinary dentist much oftener than those of the lower jaws.

Leveling the Molar Teeth.—The sharp spicula of molar teeth, due to uneven wear, often seriously lacerate the tongue and buccal membrane of the mouth, causing profuse salivation, improper mastication of food, nervous jerking of the head, pulling on the bit, going sideways in harness, colic attacks, etc. Back the animal into a narrow stall, place mouth speculum in mouth, so that you can make a careful manual examination, and learn without a doubt just what is the matter. The sharp spicula are easily removed with a light closed molar cutter, or a dental "rake," a very valuable instrument designed for this purpose, after which the finishing touches can be given with the dental file. I would caution against the too free use of the file; some appear to be under the impression that a horse's molars should be as level as a billiard table. This is entirely wrong, because a horse whose molars are in this condition cannot properly masticate his food, because of the incline plane of the teeth have been removed, against which mastication has to take place. All that is necessary to do is to remove the sharp projecting points, so that they cannot wound any of the soft parts of the mouth. In using rasps or files, the horse will stand much better if the mouth speculum is removed. Care should be exercised by the practitioner that the horse does not strike out with his fore feet, as painful, if not fatal accidents have taken place from this cause. In operating on vicious animals who are in-

clined to strike, a hobble should be buckled around one of the fore limbs, and loosely passed around the other one and held by an assistant. This will prevent the animal from striking, and at the same time, should the animal rear or otherwise become unmanageable, it can be quickly released to prevent it from falling or otherwise injuring itself.

Caries of Molar Teeth.—The subject of dental caries in the horse is of considerable importance to the veterinarian, because it is a disease that is very common among horses and often causes serious morbid pathological changes in the animal economy.

A tooth, as we know, is composed of dentine, enamel, cement or crusta petrosa. Caries may appear in any of these structures singly, or even involve all three portions simultaneously, though it is usually in the structure of the enamel that caries first takes place. Viewed under the microscope, the rod-like structure of the enamel presents a disarranged appearance, with dark transverse lines or markings over its surface. Delicate fibre-like bodies are also visible within the structure of the enamel; these bodies stain readily with carmine, and are believed to be the remnants of the delicate membrane (cuticle of the enamel) or Nasyth's membrane. In the pit-like cavities of a carious tooth, are most always found colonies of bacteria of various species due to the presence of decayed vegetable matter lodged therein. These bacteria are largely responsible for the rapid destruction that takes place in the structure of a carious tooth. After the enamel of a tooth is once destroyed, decay is rapid, because the other component parts are much softer, and offer but little resistance to decay.

Diagnosis.—Where caries of a tooth is well advanced the matter of diagnosis becomes easy. There will be present an odor of a very disagreeable and offensive nature, which clings tenaciously to the fingers and clothing. The carious molar is usually slightly sunken beneath the surface of the adjacent teeth, though this is not always the case, a level surface being often maintained when the tooth is extensively diseased. Again,

in young horses the carious tooth may be slightly elevated above its fellows. Caries often attacks a molar tooth at the fang, and destroys the pulp cavity completely without causing any perceptible derangement of elevation or depression with the other teeth. This condition is most often met with in aged animals, whose teeth, owing to faulty anatomical conformation, are very slightly implanted in the alveolar cavities. In nearly all of such cases, no odor of decomposition will be present (dry caries). I will mention such a case met with in my practice. Bay mare, aged, was brought to me with a history of being unable for the six months previous to properly masticate hay sufficient to permit of deglutition. The hay would, after slight mastication, become wadded up in the animal's mouth, who would then drop it out. On examining the molar teeth nothing amiss could be detected. The teeth all appeared to be absolutely sound and their relation to each other was perfectly regular. Yet the animal was entirely unable to properly masticate a small bundle of hay placed before her sufficiently to permit her to swallow it. Being nonplused at this state of affairs, I made a careful examination of the throat and fauces, but nothing abnormal could be found. Each molar tooth was again examined separately with the fingers, with strong lateral pressure. Upon reaching the third molar on the right side, it was easily lifted out with the fingers, as was its fellow in the opposite jaw. The mare immediately afterwards began to masticate and swallow hay without the least difficulty. The roots of the teeth were extensively carious and absorbed.

Treatment of Carious Molars.—Conservatism should take precedence in the treatment of carious teeth. Where the diseased process is not extensive, does not interfere in any way with the general health of the animal, we should not be hasty in recommending extraction. Not only on account of the enormous difficulty often attending such operations, but of the unsatisfactory condition in which horses' jaws are often left after performing such operations. Necrosis, caries, and dental fistulæ are often sequelæ after extraction of molars. Of course, where the

tooth and its adjacent parts are diseased to such an extent as to interfere with the proper mastication of food, extraction is the only course to be pursued. I know of many horses affected with slight caries of the molar teeth who perform their usual labors for years without the slightest inconvenience. In such cases extraction would be meddlesome interference. We should at all times weigh well the results to be achieved before making such a large opening in a horse's jaw as is left after the extraction of molar teeth. As a general rule these cavities become filled with a decomposed mass of ingestive material which often causes much more serious inconvenience than a carious tooth. In the upper jaw this difficulty can in a large measure be overcome by filling the cavity with flexible gutta percha packing, but we can derive but little benefit from this method in the lower jaws. I have tried all manner of substances for filling such cavities in the lower jaw, with but very meagre results. In many cases we find that under proper antiseptic treatment the cavities quickly heal up, but in others, caries, necrosis, and dental fistulæ persist in spite of the most careful treatment.

Abnormal Growth of Molar Teeth.—The teeth of horses are of continuous growth during the life of the animal. They are pushed up from the alveoli to replace the surfaces worn off by friction, so that the crown is formed by the various portions of the fang, each of which issues in its turn from the alveolar cavity. When the conformation of the upper and lower jaws are in exact apposition to each other, and the density of the structure of all the teeth in the jaws are the same, the probabilities are, that the wearing surfaces of all the teeth will be equal, and no irregularities of their wearing surfaces will occur—but when there exists anatomical defects in the structure of the jaws, we may expect corresponding defects in the frictional surfaces of the teeth. We see this condition well illustrated in the condition known as "overshot" and "undershot" jaws. In the former, the upper jaws are longer and overlap those of the lower, and in the latter, the reverse is the case. When either one of those conditions are present, we find a corresponding dis-

placement in the grinding surfaces of the molar teeth, permitting uneven wear and abnormal growth of the same. The rapidity and extent of this abnormal growth will be governed entirely by the extent of the deformity of the jaws. The normal wear on horses' molar teeth is about 2mm. or $\frac{1}{12}$ of an inch per year. Again, where the anatomical structure of the jaws are perfect, imperfect density in the composition of the teeth will be the cause of abnormal growth of teeth, that is, a molar may be more dense and hard in structure than the one in apposition to it, and hence the former will wear more slowly and become more elongated than the tooth opposite to it, causing this in time to be entirely destroyed along with its alveolar cavity as well. This pathological condition is principally due to imperfect development or arrangement of the enamel in the structure of the teeth.

ALEX. EGER, the well-known veterinary publisher and book dealer of Chicago, went to Ottawa, Canada, with a choice selection of works of interest and value to veterinarians. He was doing a good business in selling books and taking orders, when two Canadian constables swooped down upon him and demanded a license fee of one hundred dollars or close down business. Did he do it? Do you know him? The same was asked of the Haussmann-Dunn Co., who were selling instruments.

SUICIDE OF A VETERINARIAN.—E. F. Anderson, V. S., of Hoosick Falls, N. Y., committed suicide by hanging himself on Sept. 2. He went into the hay loft of the barn where he kept his horse and fastened a rope to a rafter, tied it about his neck, and then jumped through the hole which is used for throwing the hay into the stall below. A wound was also found on his breast, which appeared as though he had made an unsuccessful attempt to shoot himself. Despondency through ill health is supposed to have been the cause of his act. He was about 42 years old, was a native of England, and was a graduate of the Ontario Veterinary College. He had practiced in Hoosick Falls for sixteen years, and was a member of the New York State Veterinary Medical Society. His widowed sister, Mrs. Gertrude Briant, wishes to dispose of his instruments, and has appointed Mr. C. F. Smith, Hoosick Falls, N. Y., to attend to the details for her.

REPORT ON COLLEGES AND EDUCATION.*

By C. C. LYFORD, D. V. S., MINNEAPOLIS, MINN.

Rather than from the standpoint of scientific and professional excellence, the average veterinary college was started on a business basis from lack of capital, hence the necessity of making it a financial success until it should prove self-sustaining. And, as it is often the case, the participants are slow in advancing their method to keep pace with the times. To me, this seems to be the case with our Canadian veterinary colleges, and are thus failing to keep abreast with our American, British and Continental schools. One of these, with but a short two-year course, that should have been advanced many years ago, while the other, thought the first English-speaking college to raise its standard to that of three sessions of six months each, seems to have been hibernating, and to have been operating under practically the same methods of late as those taught twenty-five years ago. Though McGill Veterinary College has practically suspended for the present, word comes to me from Montreal, July 9th, saying, "Matters will soon be so arranged that McGill will have a veterinary faculty second to none anywhere." This, it is hoped, means advanced up-to-date methods, with the increase in number of faculty and with apartments commodious and complete.

Our new State laws of Minnesota requires graduates who come up for examination before said State Board to have a diploma from a legally authorized veterinary college or university having a curriculum of not less than three sessions of six months each. We are in hopes that the two-year colleges will see the necessity of equalling these requirements, both in length and number of sessions, as it is certainly very disheartening to a graduate to find himself so handicapped, saying nothing of those who later on wish to join the American Veterinary Medical Association, and find themselves barred from registration, as they

* Read before the Minnesota State Veterinary Medical Association, July 17th, 1903.

are considered "non-standard," notwithstanding they may be excellent practitioners and in other ways better educated than the average members of said association. It seems to me the duty of such colleges to their students (were they honestly considered) that such a course should no longer continue, and for those who have graduated (and who wish a third term), an extra session equalling these requirements should be given free to those who will attend.

Our State Examining Board has all kinds of propositions to face. Amongst other things, which seems to me a cheap acknowledgment of lack of quality and ability of a graduate, is for a professor to ask that their graduates be passed without examination. It surely puts a poor moral standing on both, especially the professor.

Our American colleges are to be found in the United States and Canada as follows: Washington, D. C., 1; New York State 2, New York City 1, Ithaca State University, 1; Pennsylvania, Philadelphia, 1; Ohio, Columbus, State University, 1; Michigan, Grand Rapids, 1; Tennessee, Nashville, 1; Illinois, Chicago, 2; Iowa, Ames State University, 1; Missouri, Kansas City, 3; California, San Francisco, 1; Canada, Toronto, 1, Montreal, 1.

In looking over the catalogues from the various colleges, one cannot help seeing that they are to a certain extent educators, as their covers, contents and general appearance can but have a certain moral effect on those who enter these colleges.

The majority of them are tasty, nicely printed, well gotten up, indicative of character, while others are flashy, cheap and horsey in appearance, giving one a pang rather than pleasure, and if they were devoid of covers, would be nearer in accord in professional ethics.

Is it a wonder that some of our profession, tutored under such conditions, fail to realize that what seemingly was meant for an embellishment, lacks in dignity and quality?

As a rule, our American veterinary colleges have improved greatly during the past few years, not only in their methods of

teaching, and length of course, as well as number of subjects taught, while in their clinical demonstrations and especially in operative surgery, many of our Western colleges seemingly are leading the Eastern ones.

It is to be regretted that such a high grade veterinary institute as Harvard found it necessary to close its doors and that the Pennsylvania college, which was started on the most elaborate scale of any of our American schools, and with a staff of well-qualified, energetic, hard-working men, and later on it was found necessary to take a backward step. The grounds and buildings have been taken for other purposes, and in their stead apartments of less commodious proportions and grounds less suitable and quite limited, have been made use of.

Some of our colleges lay claim to having a larger percentage than other schools of professors in experimental stations. Admitting this to be a fact, is it not equally true that the majority of these would not have been able to make a living practicing their own profession, and were given these positions more by political or private pull than from professional excellence.

I have often been asked my opinion regarding the veterinary courses given at agricultural colleges, and their real value from a professional standpoint. Having started at such an institution, one would naturally expect me to favor such a course, but I am of the opinion that the veterinary colleges which allow credit for one session of six or nine months for the instructions received at the average agricultural college, overestimate their real value, so far as veterinary teaching and practical work is concerned, as but six months is required, and quite often the course is not too practical nor very religiously adhered to as to number of lectures.

Some institutions, I am glad to say, have allowed a more extended course, and have had some excellent professors. Such was the case with the Illinois State University, when Doctor F. W. Prentice gave a course of two years of nine months. I am sorry to say there are few such men as Dr. Prentice in the agricultural institutions.

I wish to call your attention especially to the veterinary course given at Cornell, Columbus, and Ames. The first two have three years of nine months each, while the last named has a four-year course of nine months. Barring the lack of practice, which is not extensive at such schools as a rule, these colleges have every opportunity of giving their students the very best education from a scientific point of view, and at much more reasonable terms than other veterinary institutions, and with surroundings that stimulate character, culture and refinement.

But three veterinary colleges at present can properly be classed as two-year schools. These are the Toronto, Grand Rapids, and Wattles, of Kansas City. By the catalogues of these three schools, it is easy to see that they are squirming under the pressure brought to bear on them to induce a change of heart, course and character. There is a cheap acknowledgment of two of these colleges as to contemplated change of course. One says (in large type), "Such change will not affect students entering this year." Does this not sound like "Hurry up and get in before it is too late?" I might add, there is liable to be plenty of time for the yet unborn to get in on these terms, as I am aware of at least twenty odd years of such good intentions. The other says, "It has always been the intention of the management that the school *should* be a high-grade school . . . however, much depends upon the action taken by other veterinary educational institutions." Does this mean anything else than the other fellow is to be blamed if we do not do it? Or, we are bound to be the last one? It looks like three of a kind.

Colleges are like individuals. It is not the number of students, or the large list of graduates that make a school popular, and its influence felt.

Anyone who has ever seen the old Dick Veterinary College of Edinburgh and met such men as Fleming, Williams, Walley, McEachran, and Law, cannot help respecting the founder of said institution, even though they had never known *him*.

Our journals and periodicals consist of but three, two monthly journals, and one quarterly bulletin.

THE AMERICAN VETERINARY REVIEW, being the oldest, is due first consideration, and being the largest, deserves first place as a representative journal. This journal is nicely edited, promptly delivered, always on time. A clean, comprehensive, non-partisan sheet, comparing favorably with the best British and Continental journals.

The Journal of Comparative Medicine and Veterinary Archives is more of a representative college production. References and notices seem to be its main effort, judging from the number of times a single personage has been referred to in some of its numbers; a little short of twenty was the record on last count. In reporting both the Atlantic City and Minneapolis meetings, two very non-professional men, neither members of the A. V. M. A., receive the banner write-ups. It is certainly pleasing to see that there is such an affiliation and personal interest, but cannot help reminding one of a mutual admiration association.

The Quarterly Bulletin of the Chicago Veterinary College is in many ways a valuable production, giving some very interesting cases of treatment and new operations. These up-to-date methods are a credit to the college and of value to the profession.

"THE KANSAS CITY VETERINARY COLLEGE QUARTERLY," published in the interests of the school whose name it bears, for September, is received, and contains much information concerning the school, the alumni, as well as for the profession in general, there being several original illustrated articles by members of the faculty and graduates of the college.

A VETERINARY BARD.—"With the compliments of the Author," we have received from Dr. A. S. Alexander, veterinary editor of the *Breeder's Gazette*, late of the faculty of the Chicago Veterinary College, a neat little booklet of poems entitled "Verses in Scotch." As the text is in the good old Scotch dialect, and as our Highland blood is several generations removed, we do not feel competent to give a critical review of the quality of the verses, but they seem tuneful, and will no doubt prove of much interest to readers.

POISONED FROM EATING LOCUST-TREE BARK

(ROBINIA PSEUDACACIA, FALSE ACACIA.)

BY W. W. GARDINER, V. M. D., M. D., MOORESTOWN, N. J.

Called on July 6th, 1903, at 8.30 P. M., to see bay mare, six years old. Found all symptoms of acute gastro-enteritis; mucous membranes inflamed, pulse very weak, heart scarcely perceptible, but rapid; bleeding at mouth; champing her teeth, like a fretty horse on bit, and a great deal of frothy saliva; also profuse watery diarrhoea.

After closely questioning owner, found that at 11 A. M. she had been hitched to a small locust tree and had eaten the bark clear down to the wood, and looked as if the wood had been licked to get the sap as it ran. She began to bleed at the mouth at 1.30 P. M. Diarrhoea started at 2 P. M. Prescribed treatment for same, with good response, but only temporary. She died next day at 2 A. M. Post-mortem Lesions.—Found heart in diastole contained a large chicken-fat clot; stomach and intestines contained nearly all the watery fluids of the body, and blood-vessels had very little blood in them.

This well-known indigenous tree has a place in the materia medica of the "eclectics." The bark of the root is the most active part and is said to be tonic, and in large doses purgative and emetic. It has been investigated by D. F. B. Powers and J. Cambier (*Pharm. Rundschau*, February, 1900). They found a small amount of an alkaloid which they showed to be identical with choline. They also isolated a globulin and an albumose. This phyt-albumose produces purging and vomiting. It is precipitated by alkaloidal reagents. Zwenger and Dronke (*Ann. Chem. Pharm.*, Supp. I, 257) found a glucoside robinin, $C_{25}H_{30}O_{16}$ which, treated with dilute acids, yielded quercetin and a sugar. Hlasiwetz obtained asparagin, $C_4H_8N_2O_3$, from the root.

Three cases of poisoning of children by the root have been recorded (*Ann. de Thérap.*, 1860, p. 64); Dr. Z. T. Emery (*N. Y.*

Med. Journ., Jan. 22, 1887) reports the poisoning of 32 boys from chewing the inner bark of the tree.

The symptoms in the mildest cases were vomiting and flushed faces, dryness of throat and mouth, and dilated pupils; in the severest cases to these were added epigastric pain, extremely feeble, intermittent heart action and stupor. These effects were explained by the finding in the bark of an exceedingly poisonous albuminoid or enzyme, robinalbin, which, according to Prof. Kobert (*Merck's Bull.*, April, 1891), is similar to but not identical with ricin.

IT TOOK NEARLY A CENTURY TO GAIN A MINUTE.—The following table, compiled by the New York *Herald* shows the records of the trotting champions since 1806 and the distance which Lou Dillon would have beaten each of them in a mile race.

Horse	Record for One Mile	Year Made	Dist. covered in feet ea. second	No. feet Trotted in 2.00	No. feet Behind Lou Dillon
Yankee	2.59	1806	29.49	3,539	1.741
Boston Horse . . .	2.48 $\frac{1}{2}$	1810	31.33	3,760	1,520
Trouble	2.43 $\frac{1}{2}$	1826	32.28	3,874	1,416
Sally Miller	2.37	1834	33.63	4,036	1,244
Edwin Forrest . . .	2.36 $\frac{1}{2}$	1838	33.74	4,049	1,231
Confidence	2.36	1838	33.85	4,062	1,218
Dutchman	2.32	1839	34.73	4,168	1,112
Lady Suffolk . . .	2.29 $\frac{1}{2}$	1845	35.32	4,238	1,042
Pelham	2.28	1849	35.67	4,280	1,000
Highland Maid . . .	2.27	1853	35.92	4,310	970
Flora Temple . . .	2.19 $\frac{3}{4}$	1859	37.77	4,532	748
Dexter	2.17 $\frac{1}{4}$	1867	38.47	4,626	654
Goldsmith Maid . .	2.14	1874	39.40	4,728	552
Rarus	2.13 $\frac{1}{4}$	1878	39.62	4,755	525
St. Julien	2.11 $\frac{1}{4}$	1880	40.22	4,826	427
Jay-Eye-See	2.10	1884	40.61	4,873	380
Maud S.	2.08 $\frac{3}{4}$	1885	41.01	4,921	342
Sunol	2.08 $\frac{1}{4}$	1891	41.17	4,940	323
Nancy Hanks . . .	2.04	1892	42.58	5,109	154
Alix	2.03 $\frac{3}{4}$	1894	42.65	5,118	145
The Abbot	2.03 $\frac{1}{4}$	1900	42.84	5,141	122
Cresceus	2.02 $\frac{1}{4}$	1901	43.19	5,182	81
Lou Dillon	2.00	1903	44.00	5,280	...

REPORTS OF CASES.

"Careful observation makes a skillful practitioner, but his skill dies with him. By recording his observations, he adds to the knowledge of his profession, and assists by his facts in building up the solid edifice of pathological science."

AMPUTATION OF THE PENIS OF A GELDING ON ACCOUNT OF PARALYSIS.

By JOHN J. REPP, V. M. D.

A gray gelding, eight years old, which was being used on a railroad grading contract, was brought to my clinic at the Veterinary Hospital, Iowa State College, for advice in regard to an affection involving the penis. The penis was protruded from the sheath for a distance of about 8 inches, was flaccid, and the animal was unable to retract it. Otherwise there was nothing abnormal. The owner said he had bought the horse in Tennessee about six months before and that he was then in the same condition and had never since shown any improvement. He had constantly performed the required amount of labor, but on account of the appearance the owner desired to have it treated. I advised amputation, to which the owner gave his assent. The horse was cast upon the left side and anesthetized with chloroform. Both hind legs were drawn back in order to afford access to the region of operation. The penis was drawn out so that the amputation might be made at such a point as would allow all of the stump to be retained within the sheath, a catheter inserted to aid in finding the urethra, and a tourniquet placed around the organ to prevent hæmorrhage when the incision should be made. The penis was kept out of the sheath and the tourniquet kept from slipping off by punching a hatpin through the corpora cavernosa above the urethra. A transverse incision about two inches long was made through the skin at the lower face of the penis, over the urethra, extending about one inch on each side of the median line, and a similar incision was made one and a half inches nearer the end of the penis. A longitudinal incision was then made upon the median line joining these two incisions and the two flaps of skin thus marked out removed from the underlying tissues. Next the urethra and its surrounding corpus spongiosum were carefully separated from the corpora cavernosa, and cut off at the level of the transverse incision nearest the free extremity of the penis. The part of the urethra and corpus spongiosum thus freed was carried

back out of the way and the end of the corpora cavernosa cut off with the knife at the level of the upper transverse incision of the skin. The part of the urethra which had been dissected out was then laid open by a longitudinal incision upon its inferior face at the median line, spread out fanlike and its anterior border sutured to the edge of the fibrous envelop of the stump of the corpora cavernosa. The tourniquet was then loosened somewhat, and removed as soon as it was no longer necessary to prevent hæmorrhage. The animal was freed when the operation was complete and as soon as it was able to arise it was put into a stall. The after-treatment consisted in injecting into the sheath twice a day a two per cent. solution of carbolic acid and bathing the sheath with hot water to keep down swelling. Three weeks after the operation the horse was discharged cured, having reacted very well. Ten months later the owner wrote in answer to my inquiry as follows: "After taking the gray gelding from the hospital we turned him out on grass for a month and then put him to work. He has done first class. He was a \$25 horse when we took him to the hospital to have his penis removed and to-day he is worth \$100."

VERMINOUS BRONCHITIS OF CALVES.

By E. I. SMITH, D. V. M., Franklinville, N. Y.

On August 20, 1903, I was called to examine a herd of twenty calves, which were dying and suffering emaciation. Upon examination I found four had died and that four more were ill. The ailing ones were unable to stand alone and were greatly emaciated, hidebound, refusing to eat, and suffering with a diarrhoea and a loose wheezing cough. They were being fed dry corn meal and watered from a driven well located in a small pasture which was situated in a rich fertile valley.

I immediately ordered a change of diet, consisting largely of cooked middlings, mixed with a good supply of deep well water, and prescribed the following:

R Spts. terebinthinæ, $\frac{3}{4}$ iv.
 Sig:—Give one tablespoonful three times daily.
 Also, R Tr. opii, $\frac{3}{4}$ i.
 Fl. ext. nux vom., $\frac{3}{4}$ i.
 Alcohol, $\frac{3}{4}$ iss.
 Misce. Sig:—Give one teaspoonful twice daily.

The next day another calf died, and a post-mortem revealed a normal set of digestive organs, but upon opening the thorax and examining the lungs they were found to be hepatized in small areas, or, in other words, lobular congestion.

There were also grayish white spots scattered over the surface of the lungs. The trachea was opened, and a large number of parasites, about two to three inches long and about the size of a No. 40 thread, bathed in a thick mucous secretion, stuck to the walls of the bronchi, trachea and upper air passages. Three more died, but one ailing one survived, making a fatality of seven.

I did not order a change of pasture, but regret that I did not, yet after an interval of two weeks the others were reported doing well, with no further losses or illness. I did commend the idea of using exclusively deep-well water.

MORE EXPERIENCES WITH AZOTURIA, COMPLICATED BY PARALYSIS OF THE ANTERIOR CRURAL NERVE.

By J. HARRISON, V. S., Maple Rapids, Mich.

I wish at this time to report a couple of cases of azoturia in answer to "A Neglected Case of Azoturia," by Hugh S. Maxwell, V. S., of Salina, Kansas.

In his case No. 1, his picture is an exact reproduction of one of my cases.

The patient was a 10-year-old gelding, and had been down for about eight hours when I was called. I gave a purgative and some anodyne treatment at first, and after three days put him in a sling, but after ten minutes I was compelled to lay him down again. We kept raising him in the sling about every two hours, hand-rubbing his legs and loins and using a stimulating liniment, keeping him in the sling for about ten or fifteen minutes at a time. We kept this up for three days, when he got up himself without the use of the slings. I then prescribed diuretics and general tonics. The horse was turned out to pasture and seemed to be getting better every day for about a week, when he was caught out in a heavy thunderstorm and got worse. In fact, was in the condition exactly that Dr. Maxwell's picture presents. I then, along with the general tonics, prescribed hyposulphite of soda, in ounce doses, three times a day, and potassium iodide in one drachm and increased to one and a half drachm doses three times a day. We kept this up for about three weeks, but without any apparent improvement. The owner getting discouraged, had the horse destroyed. I think he was incurable. Whether the rain storm had any detrimental effect or not I do not know.

The Doctor's cut, No. 2, is also an exact reproduction of an-

other case that I had. This was an eight-year-old gelding. I treated this one in the same way that I did the first. He also lay for three days before putting him up in the slings, only that after the first day's use of the slings he could get up himself, but we kept him in the slings at night for about a week. Only one side was affected (the right side). I am of the opinion that the psoas muscles were not affected, but rather the gluteals and the triceps abductor femoris. As Dr. Maxwell states, I used stimulating liniments along the line of the abductor femoris and gluteal muscles and afterwards sweat blisters. The horse, although not entirely well yet, keeps improving all the time. The owner is working him at light work. In case No. 2 by Dr. Maxwell, I think by following this course of treatment it will recover.

METROTOMY IN THE SOW.

By Dr. W. G. HUYETT, Wernersville, Pa.

Saturday, Aug. 22, 1903, I was called to see a Poland China sow, owned by a Mr. Snyder, near Wernersville. I recollect the owner informing me that the sow was primiparous, and had in the morning given birth to seven healthy young. The sow, in his estimation, was doing apparently well. He went about his business, only to notice at noon something protruding per vagina. At that time, however, only about 3 cm. in length, according to his statement; but that she seemed in great pain, and was straining violently. Upon inspection I observed a complete eversion of the fundus and left cornua of uterus, while the right cornua was only partially everted. The parts had been dragged about the ground floor, thus permitting the organ to become covered with filth, obtaining a number of small perforations by brushing over obstacles in walking, and besides were highly discolored and swollen, due to the length of exposure to air, and to the circulation being already impeded.

I had the animal restrained, bathed the organ with a 5% solution of zenoleum, sutured the small perforations, and had some lard on hand as a lubricant, preparatory to reduction. The slightest attempt at reduction being repulsed by violent paroxysms of straining, the owner was instructed upon the hopeless task of restoring the parts to their natural position, and the operation of excision was recommended, as a last resort, after explaining the gravity of the case, and the mortality of the operation itself. I now applied a ligature and removed the organ

with a scalpel close to the vagina, bathed the stump with a solution of zenoleum, and reduced it. The animal apparently rested well for the time being, but died a few hours later.

I would be pleased to have other veterinarians relate their experience with this operation in the various animals through our worthy journal, the REVIEW.

SOFT FIBROMA OF A BULL'S PENIS.

By JOHN J. REPP, V. M. D., Ames, Ia.

June 9, 1900, a yearling pure-bred shorthorn bull was brought to my clinic at the veterinary hospital, Iowa State College, to be treated for a new growth upon the penis. The owner had only recently bought the bull and had not discovered the tumor until a few days previous to bringing him to the clinic, when he noticed that the bull's penis bled when he served a cow. Upon searching for the cause of the hæmorrhage he found the tumor.

Upon examination I found a flat, circular, rather vascular tumor of irregular contour, about one-half inch thick and one and one-half inches in diameter, at the tip of the penis, forming a sort of cap over the extremity, and attached by a narrow neck a little above the meatus urinarius. The bull was cast and tied well and the tumor carefully dissected off, the surface of incision being made well back into the healthy tissues with a view to providing against recurrence. The animal was taken home immediately after the operation.

Upon microscopic examination I found the tumor to be a soft fibroma.

On March 27, 1901, the owner of the bull wrote me in reply to my inquiry that at that date there was only a small red spot to mark the place where the tumor had been.

I may add that I have had three other cases presenting clinical manifestations closely resembling those presented in this case, but have not made a microscopic examination of the tumor in any case but the one above recorded.

LACTATION IN MALE LAMBS.

By G. W. BUTLER, V. S., Inspector B. A. I., Eau Claire, Wis.

Eight large, very fat, male lambs, averaging 110 lbs. each, probably five to six months old, killed at the abattoir at which I am inspector, had milk-secreting udders. In some the glands at the base of the teats consisted in a circumscribed well-round-

ed body about two inches in diameter, the teats being large and well developed. The teats and udder were well filled with milk of a natural color and consistency. In others the teats were smaller, with the udders less developed, but in all there was a marked condition of lactation. These lambs all came from the same farm, were of the Shropshire breed and had been well fed with grain in addition to nursing their mothers. I do not know the exact age at which they were castrated. This peculiarity in the male may not be so rare, but to me it is quite interesting, as I had never before seen or heard of such a number of animals together showing a like condition.

ABSCCESS SUPERVENING AFTER PUNCTURE OF THE CÆCUM.
—Puncture of the cæcum is not always harmless. It has to be done in a hurry, and possibly rigid antisepsis is not always observed. The apparatus is not always perfect, and the trocar and canula do not always fit perfectly; furthermore, portions of ingesta adhering to the instrument may contaminate the deep parts of the wound. It may happen that from four to six days after the operation a swelling will appear in the hollow of the flank, which is a certain indication of the formation of an abscess. The skin appears to have healed, but in a few days' time an escape of pus will take place. If neglected, this little accident may give rise to considerable trouble, especially purulent necrosis of the aponeurosis of the small oblique muscle, which is most difficult to treat. The abscess should therefore be at once evacuated. The course taken by the trocar should be ascertained with a grooved director, the groove turned downwards; usually it will pass in by itself an inch or one and a half inches into the abscess. The fistula is divided to the bottom with the bistoury, at first downwards, and, turning the director to act as a guide to the bistoury, upwards, and right and left, so that a crucial incision is made, uniting over the point of the puncture, each branch being about an inch long. The flaps then can be lifted up and the abscess emptied and dressed, and soon heals up. M. Drouin has operated on a considerable number of cases by this method with success, a cure usually taking place in a few days.—(M. Drouin, in *Revue Générale de Médecine Vétérinaire*, March 1, 1903.)

THE "Bulletin of the North Carolina State Board of Agriculture" for May of the current year is devoted to "The Cattle Tick and Its Relation to the Cattle Industry of North Carolina," and is the work of the State Veterinarian, Dr. Tait Butler.

EXTRACTS FROM EXCHANGES.

FRENCH REVIEW.

By Prof. A. LIAUTARD, M. D., V. M.

POSITION AS A MEANS OF TREATMENT IN DISEASES OF LARGE RUMINANTS [*J. Guittard*].—This question has already been discussed by the author in his book on diseases of the digestive apparatus of the ruminants, and it is to bring out its importance that the following is published: A steer has been ailing for three weeks, and remains in an unsatisfactory condition. His bowels are normal, appetite fair, but no rumination. He is weak, dislikes to move. The pulse is very slow, although regular—24 beats to the minute. The animal seems failing gradually without any cause. He was bitten by a mad dog several months before, but he never showed signs of rabies. The owner reports, however, that when either standing or lying down his steer exhibited a peculiar noise of liquid gurgling, as if a certain quantity of water was pushed up his throat, and then it would go down again. On this information it was supposed that the cause of this was due to accumulation of liquids in the reticulum pushed back towards the throat by the antiperistaltic contractions of rumination. It was then observed that the animal while lying down was resting on a place excessively inclined down from backwards forward, by an accumulation of manure which had been left on the floor and by the bedding that the animal had scraped back in pawing. Would not this condition give rise to the gastro-intestinal trouble? The manure was removed at once and a few hours after rumination resumed its normal regularity, and recovery followed.—(*Progrès Vet.*, April 12, 1903.)

GUTTUROMYCOSIS IN HORSES [*J. N. Ries*].—A horse sick for ten days has an abundant discharge from both nostrils, mixed with food. There is great thirst; the prehension of water is loud, with a gurgling noise, with liquid returning by the nostrils and with "an ascending column alternating with a descending one" in the œsophagus. Immediately after, the œsophagus becomes hard and feels like a fibrous cord. After a few minutes of attempts, "the animal stops drinking, extends the head, the lips and cheeks contract, the skin of those regions is contracted in concentric folds; that of the pretrachelian re-

gion is longitudinal; the œsophagus dilates from below upwards; a nausea takes place and is followed by the rejection through the mouth and nose of liquid food and softened alimentary masses." After a few minutes rest the animal tries again to drink, when the same manifestations return. Mastication is slow and difficult. Green food is about to be swallowed, when suddenly violent nausea appears, with contraction as above and the alimentary bolus is thrown back. The throat is not sensitive; the tongue is very painful and the animal rebels against its being examined. The symptoms rapidly grow worse, and the animal, showing symptoms of septic pneumonia, is destroyed. Besides the lesions of this disease, the author at the post-mortem found: On the median wall of the left guttural pouch, the mucous membrane was thickened and covered with a hard covering, white yellowish, involving in its thickness the glosso-pharyngeal nerve, the pharyngeal branch of the pneumogastric, the hypoglossus and part of the superior cervical ganglion. The mucous membrane is covered with a thin pellicle, slightly adherent, and upon which grows a pure culture of *Aspergillus fumigatus*. The microscopic examination shows that the fibres of the nerves above named are degenerated and invaded by a connective proliferation with abundant radiated mycelian tufts.—(*Rec. de Med. Vet.*, April, 1903.)

SARCOMA OF THE HEART AND DIGESTIVE APPARATUS IN A STEER [Mr. Dubois].—The history of this animal is that he has been suffering with obstinate constipation for several weeks, which remains rebellious to the other modes of treatment. Admitted to the hospital of the Toulouse Veterinary School, the steer is in bad condition; has no appetite; temperature $39^{\circ}5$; pulse hard, 90 per minute; respiration accelerated. The rumen is filled with a hard alimentary mass. There is some tympanites. Fæces hard, with foetid odor and coated with brownish and bloody mucosities. Examination of the chest, lungs and heart, reveals nothing. A diagnosis is made of gastric indigestion complicated with enteritis, with a prognosis specially serious, as the animal refuses all food and has taken none for eighteen days. To relieve the constipation, pilocarpine is given once, 20 centigrammes, and two days later 30. No result. Intravenous injections of chloride of barium is resorted to. 50 centigrammes are thrown in the jugular—no result. The next day 50 centigrammes more followed by 50 more half an hour later. No immediate results; but the following days a true intestinal debordement took place and diarrhœa set in, which soon became

exhausting. His condition became worse and gradually the animal passed away. At the post-mortem, on opening the abdominal cavity, an enormous tumor, flattened in shape, rested on the rumen, many-leaves and abomasum. It measured 50 centimetres in length, 15 in width and between 7 and 8 in thickness. Firm in consistency in most of its extent, it was in some parts less hard and fluctuating. Its pressing against all the gastric sacs explains all the digestive troubles. Besides this large growth, there were many small ones spread over the walls of the rumen and reticulum. On examination of the thorax lesions of pericarditis and myocarditis were observed. Small cancerous nodules were found in the thickness of the pericardium. Between the four orifices of the base of the ventricular mass, there was a tumor as big as a large egg, filling the interauricular septum, which then measured between four and five centimetres thick. The generalization of the tumor to several organs indicates sufficiently its malignity. The histological examination showed that it was formed by an encephaloid sarcoma with small round cells.—(*Revue Vétérinaire*, May 1, 1903.)

TREATMENT OF COLICS BY PHYSICAL AGENTS (*J. Sobelsohn*).—The author thinks that, in the treatment of colics, the use of drugs can often be replaced with advantage by physical means, specially by hydrotherapy and mechanotherapy; he has obtained good results with them in many cases. Hydrotherapy promotes two essential conditions in colics: stimulates peristalsis and relieves pain. Besides, it softens and dilutes the intestinal contents, isolates it from the coats of the organ and carries towards the anus all soft fæces. It is used in horses under the shape of cold or warm enemas or enteroclysms, of cold or warm applications, by developing compresses and of affusions on the abdomen. In relation to the enemas and the enteroclysms, their action varies according to the quantity and temperature of the injected water, the pressure exercised by the water and the frequency of their administration. It is not necessary to inject at once large quantities of liquid; it is better to administer it little by little, as repeated enteroclysms reach and soak by degrees the excrements situated further and further from the anus. Theoretically, cold water would be best, as it stimulates the contraction of the intestinal walls in a state of paresia; but these contractions bring on the quick evacuation of the water, whose action is then only short and incomplete. The use of cold water is contra-indicated in spasmodic colics. Water heated at 30° or

40°, quiets the normal state of irritation, acts on account of its being kept longer and reduces the tenesmus. The stronger the pressure of the water, the quicker and deeper will it penetrate, and reach the regions further. One must take into consideration the resistance due to the abdominal pressure and the extensibility of the intestine. The seat and nature of the intestinal obstruction must also be considered in the number of enemata and the time between them. Soap, salts, purgatives and mucilaginous drugs can be added to the water; but their importance is only accessory. Moist wrapping has a reflex action on peristalsis and acts as a sedative of the sensitive nerves. Its use must be limited to rheumatismal colics. Affusions have also only a powerful reflex action upon the circulatory system by the sudden cooling of the cutaneous surface; hence reaction on peristalsis. The author admits also that fear, resented by the animal, acts on the intestinal motions, which become more energetic. Mechanotherapy acts on the surface of the body, in the rectum or in the vagina. External massage of the abdomen accelerates the circulation; it may also have a purely mechanic effect in softening and displacing the intestinal contents. By rectal and vaginal exploration, the intestine can be massed, its retroversion can be performed if necessary, invagination or strangulation be reduced. While massing, the hand feels for the part of the intestine which is obstructed; its contents can be crushed, squeezed and displaced. When this result is obtained, the regular circulation and its peristaltic contractions return in the part of the intestines which has been made free; the organ is no longer under the influence of the irritation produced by the pressure of the fæces; while these are more readily softened by the water which is injected afterwards, and are more easily expelled. Manual treatment by rectum alone permits of a remedy to intestinal displacements. Physical modes of treatment cannot have any injurious effect, as they do not interfere in any way with cardiac and pulmonary functions.—(*Thesis of Bern, Rev. Vet.*)

FOREIGN BODY IN THE ŒSOPHAGUS OF A COW—LACERATION OF THE ORGAN—DEATH [*P. Bergeon*].—Of course, many are the cases when the probang is the only means to dislodge a foreign body, and rare are the instances when the probang is at hand, and artificial instruments must be resorted to to take its place. Among these the handle of a whip is often called to fill the part; specially is it the case when it is an empiric who has charge of the choking animal. But how dangerous it may be,

is illustrated by the following. A cow has swallowed a beet and is choking. The author is called, but is unable to reach the sick animal until late, just as the cow has died. What had taken place? An empiric had been in attendance. Of course, he could cure the beast; the case is of no importance. He takes the handle of a whip, ties a little ball of rags at one end, with a string long enough to be attached to the other end, and he proceeds to dislodge the beet. Through a too strong push or by a sudden jerk of the animal, the handle breaks in two, and fortunately the string allows the pulling out of the two pieces. A few moments after the cow groans painfully, her tongue hangs out of the mouth, an enormous swelling forms on the neck, extends rapidly, and from the chest reaches the jaws. The cow dies. At the post-mortem, besides the inflated condition of the neck, a bloody extravasation at its base on the left side, the œsophagus is found at its entrance into the chest with a laceration measuring between 12 and 15 centimetres. The laceration had evidently been done by the broken piece of the improvised probang. The beet, cause of the trouble, was found in the upper part of the œsophagus near the pharynx.—(*Journ. de Zoötechnie, April, 1903.*)

FIBROMA OF THE THYROID GLAND [*M. Mossé*].—The left thyroid gland of this horse has been enlarged for some time, but for a few months has enlarged so much that it interferes with respiration. The animal is in pain, he has lost flesh, and the owner wants him operated upon. The tumor is as big as the two fists of a man; it is ovoid, freely movable under the skin except from one side to the other; it is not painful, not warm, but very hard. At first it was supposed that the operation could be performed with the animal standing, but after the skin was divided and the muscle underneath attacked, the animal fought and he had to be thrown. The muscles were then incised, the tumor taken hold of with hooks, drawn out, and with the fingers made loose as far as its peduncle formed of the bloodvessels. The ecraseur was applied and the tumor amputated, ten minutes being required to complete the operation. Then suddenly a terrible hæmorrhage started. It was made up of arterial and venous blood. Ligature could not be applied as the peduncle was too short. The cavity was then packed with hydrophite wadding and the neck surrounded with tight towels. Blood kept on flowing for awhile and then gradually stopped. The animal was allowed to get up and placed in a stall, secured in a way to prevent his rubbing. The dressing was left on for two

days and then carefully removed. No hæmorrhage returned. The parts were then properly dressed with cresyl, sublimated solution and iodoform. The wound gradually filled up with granulations and in nearly two weeks was completely closed.—(*Bullet. So. Scien. Vet. de Lyon, March, 1903.*) [Moral:—Never attempt such operation standing, and do not amputate with ecraseur.—EDITOR.]

BOTRYOMYCOSIS OF THE SKIN IN A COW [*M. Bollet*].—This animal had on the right side of the neck three tumors, resembling granulations, which were irritated by friction. One was as big as an ordinary nut. Considered as ordinary warts, they were excised and the wounds cauterized with the red iron. Three months later the tumors had returned and were as large as before the operation. As the animal kept in condition, she was left without treatment. But several months after, the author was called, being told that similar lesions had appeared on the nose, round the eyelids, the anus, the vulva. These were treated without result and in a few days the whole body seemed to be covered with spherical tumors, about the size of an ordinary pea. The cow was clipped and different treatments applied on various parts of the body; but no result obtained. On the contrary, the tumors multiplied to such an extent that it would not have been possible to place the head of a pin between two tumors. And still the cow showed no functional disturbance. As there was no chance of recovery she was killed. At post-mortem it was found that the tumors projected inside of the skin and that lesions of similar nature existed in the muscles of the regions where the skin was adherent to them. There were some also in the connective tissue of the costal and abdominal regions. The lymphatic glands were indurated. The diagnosis was made, with microscopic examination.—(*Soc. des Scien. Veter. de Lyon, March, 1903.*)

ITALIAN REVIEW.

By Prof. A. LIAUTARD, M. D., V. M.

SARCOMA OF THE POSTERIOR VENA CAVA IN A BITCH [*Dr. Tita Odone*].—This interesting case is recorded as an addition to the mechanism of the generalization of tumors—a subject of general pathology upon which light is yet wanted. The animal in question is a bitch, rather old, which has never

had any serious illness; has carried pups five times. Four years ago she had several small tumors of the mammæ, which increased both in number and in size, and were removed two years later. The bitch recovered completely, but two years later, in 1901, she grew sick again, and finally had dyspnœa, fluid in her abdomen, her hind legs swollen, the heart weak, the temperature $37^{\circ}.2$ C. With the history of the case and the condition of the dog cancerous or sarcomatous disease was suspected, but on account of the tense condition of the abdomen the diagnosis could not be made by palpation, and the owner would not allow an exploration with the needle. No treatment was prescribed, and after two days the animal died. At the autopsy the lungs were found emphysematous, the heart hypertrophied, the abdominal cavity filled with fluid, the intestines, spleen, liver, and kidneys healthy, with the mesenteric glands enlarged. In removing the intestines, back of the liver, a swelling as big as a pigeon's egg was found, formed by an abnormal dilatation of the posterior vena cava. It consisted of a hard, movable little body attached inside of the bloodvessel, ovoid in shape, which, examined microscopically, proved to be sarcomatous in nature (*sarcoma-magni-globo-cellulare*). The author concluded by saying that in this case, the primitively developed sarcomas of the mammæ gave origin to the secondary development in the vena cava.—(*Archiv. Scientif. della R. S. and Acad. Veterin. Italiana, April, 1903.*)

TWO CASES OF ACTINOMYCOSIS OF THE TONGUE CURED WITH SCARIFICATIONS [*Dr. G. Battetta*].—In these two animals the treatment by iodide of potassium having failed, the author resorted simply to repeated scarifications. In the first cow the tongue was extensively diseased and characteristic of the "wooden tongue." During ten days the organs had been painted with tincture of iodine and intraparenchymatous injections of this same substance had been done, but without improvement. On the suggestion of Prof. R. Bossi, the author made deep scarifications in the length of the organ, which were repeated twice at the interval of a few days. After twenty days, the improvement was such that the animal was able to take her food without difficulty. In the second case the disease was not extensive; it seems as if the trouble was some neoplasm, as it formed only a kind of tumor, indurated swelling, the size of a hen's egg. An exploring puncture and examination with the microscope revealed its actinomycotic nature. The animal was treated for twelve days with iodide of potassium internally, ten

grammes a day. The only result was a slight reduction in the swelling. After a few days, supposing that the action of the iodide had passed away, scarifications were resorted to, and some twenty days after, although there remained a little elevation at the seat of the tumor, the tongue had resumed a complete motility and all escape of saliva from the mouth had subsided.—(*Il Moderno Zoöiatro*, June 25, 1903.)

CANCEROUS TUMOR AT THE BASE OF ONE HORN IN A STEER (*Dr. Gualducci Domenico*).—The animal had been suffering on several occasions with loss of rumination and appetite. When the author called once more to attend to him for one of his attacks, he noticed that it carried its head low and turned to the left. It had also a comatous aspect. On passing his hand over the left horn he found it warm and detected at its base a marked swelling. Not suspecting any relation of this condition with the digestive troubles, he merely ordered an expectant treatment. After about twenty days, the animal having grown somewhat worse, was again visited. Then the swelling of the horn had manifestly grown larger, and the horn had a tendency to deviate in its direction. The removal of the swelling and of the horn was decided upon and the operation performed easily; but instead of finding the cavities of the frontal sinus extending into the bony support of the horn, there was a large tumor extending into the entire upper part of that bone and having its roots in its infractuosities. Irregularly round and bosselated the entire growth was removed and the microscopic examination justified the diagnosis of cancerous growth. The tumor returned after a time in much larger dimensions, and the animal was destroyed. At the post-mortem no other lesion was found.—(*Clinica Veterin.*, June 20, 1903.)

INTESTINAL STRANGULATION IN A SOW AFTER SPAYING [*Dr. Gualducci Domenico*].—Castrated by an empiric, about two months previously, this animal was submitted to the fattening regime and appeared in a perfect condition of nutrition, when suddenly she had violent colic, high fever, loss of appetite and constipation. Taking her condition, regime and history into consideration, a diagnosis of intestinal occlusion was made and treatment with ultimate directions for her diet, were given; but as the animal did not seem to improve, and as she was losing flesh, she was slaughtered. The following were found at the post-mortem: Abundant serum collection in the abdominal cavity; small and large intestines congested; gangrene of a small portion of the small colon strangulated by a

fleshy band running from the left side of the sublumbar region and surrounding the intestine, attached to the left flank upon the hard and fibrous cicatricial tissue existing at the point where the incision had been made to perform the operation of spaying. This fleshy band was formed by a portion of the right uterine horn, which terminated at the right sublumbar region. It is evident that this lesion resulted from the manipulations of the operation, by improper traction made upon the right horn after the removal of the organs of the left side.—(*Clinica Veter.*, June 20, 1903.)

CONTRIBUTION TO THE THERAPY OF PURULENT TRAUMATIC ARTHRITIS OF THE TEMPORO-MAXILLARY JOINT [*Dr. Pietro Ghisleni*].—After general remarks upon purulent traumatic arthritis in general, its prognosis, treatment, etc., the author relates a case of great interest in a mule, which, after receiving a blow about a month before, over the left temporo-maxillary joint, presented some difficulty in the prehension of his food, in mastication, and finally had a swelling over the region as big as a large nut. This had kept growing, was as big as an orange, ulcerated and discharged an abundant quantity of pus. When visited, the condition was about the same; the masseterine region was invaded, the parts very painful, and the animal rebellious to any manipulation. There was a long fistulous tract running down the joint. The mule had to be cast to be operated upon. With a long incision running down to the joint, the removal of all indurated and necrotic tissue was done with the scalpel. The joint exposed, it was easy to find the ulcerated opening of the capsular ligament through which the external diseased half of the condyle of the maxillary bone was exposed. With the knife of Volkmann the diseased cartilage was removed and also all the ulcerated edges of the bone until healthy tissue was reached. The hæmorrhage was arrested, and after placing a tent of gauze in the wound, acting as a drain tube, it was dressed antiseptically and closed. The after-treatment consisted in irrigations with solutions of sublimate made twice a day and changing the gauze covered with crystals of resorcine. Operated upon January 8th, on the 19th the cavity was almost entirely closed and on the 27th recovery was complete, leaving no stiffness in the joint and only a slight cicatrix scarcely apparent.—(*Clinica Veter.*, July 4, 1903.)

LACERATION OF THE SUSPENSORY LIGAMENT IN A STEER [*Dr. C. Volpe*].—Comparatively common in solipeds, this is an accident not frequently seen in ruminants, animals which, gen-

erally quiet, are not exposed to those injuries by the nature of the work asked of them. This animal was young, three years old; he had always been at liberty, almost wild, and was very robust. To break him, a quiet older companion was given to him, but after being yoked and called upon to move he became restless. The man who drove him struck him. The animal made several jumps, struggled, and when he stopped was found with the left hind fetlock considerably extended, dropping, and when the foot rested on the ground the points of both claws were raised upwards from the ground. The animal had to be thrown to be examined. The flexor tendons were found to be in perfect condition, but the suspensory ligament showed a solution of continuity towards its lower quarter, leaving a space of five or six centimetres between the two stumps. On account of the value of the animal, an attempt at treatment was made by the application of a permanent dressing, but the violent nature of the animal, notwithstanding all the precautions taken, prevented the realization of a perfect recovery. After a month the owner removed the dressing, and as no improvement was apparent the animal was killed. At the post-mortem the tendons of the flexor muscles were found considerably elongated; the ends of the suspensory ligament were united by a dense, firm, white material, which justified the perspective of a complete recovery. It is certain that this would have taken place if the animal could have been kept quieter and the owner had had more patience.—(*Clinica Veter.*, July 18, 1903.)

DUTCH REVIEW.

By L. VAN ES, Chief State Veterinarian, Fargo, N. D.

LOSS OF THE TONGUE IN A DOG.—A one-year-old terrier was admitted to the clinic of the Utrecht Veterinary School on Jan. 20. The patient slobbered from the mouth from some unknown cause, but was able to take food and drink. Examination revealed a glossitis, the tongue was dark red, little or no swelling, somewhat coated, and the left edge was torn, being attached like a fringe, the removal of which caused neither pain nor hæmorrhage. The tongue could be moved in the usual manner. The general condition of the patient was good. For relief a 2½% solution of alum was applied to the tongue, with

apparent good results, as on the 22d the organ had greatly improved in appearance. On the 24th, however, the tongue was blue in color, cold, but without swelling. The mouth and especially the base of the tongue was again carefully examined. Without the use of any restraint or resistance on the part of the dog, the tongue suddenly dropped out. No hæmorrhage occurred, while the patient did not seem to be suffering from pain. By digital examination it was found that the organ was torn off closely along the hyoid bone, the removal being complete. No cause could be found. The dog showed appetite immediately after the catastrophe, and proved to be able to eat chopped meat and bread soaked in milk. He ate slower than usual and with the head tilted sideways. The animal could not drink unless fluid was given as a drench. On the 26th the dog could eat dry bread, but slobbered, and had to be drenched, owing to his inability to drink. In course of time, however, the escape of saliva ceased and the dog gradually learned how to drink, making a fair recovery.

STRICTURE OF THE ŒSOPHAGUS IN A COLT CAUSED BY GASTROPHILUS HÆMORRHOIDALIS.—A half-year-old filly was brought to the clinic because it had a difficulty in swallowing, which had caused her to become gradually weaker. The patient was too small for its age, very poor and weak. The mucosæ were pale and the pulse was small and weak. Food was eagerly taken and properly masticated, but on swallowing most of it was regurgitated by the nose. There was no swelling or tenderness about the throat. For examination the animal was cast in a dark stall and a strong light was thrown into the mouth and pharynx. Nothing abnormal was found and a pharyngeal paresis was suspected. The examination seemed to have proven too much for the already emaciated animal, as it died 24 hours after admittance. Autopsy revealed a liquid contents of the stomach and small intestines and a solid one in the colon. Some larvæ of *gastrophilus hæmorrhoidalis* were present in the stomach. A localized foreign body pneumonia was observed. In the mouth, pharynx and larynx nothing abnormal was found. The œsophagus contained a cylindrical bolus of food, which had dilated the lumen to about 5 c.m. This dilatation reached over a distance of 20 c.m. below the pharynx. Here a stricture was found which occluded the lumen almost completely, so that no solid food could pass. The stricture was 1 c.m. in length and seemed to have been caused by a larva of *gastrophilus hæmorrhoidalis*, which had penetrated to the outer

coat. The larva was 5 m.m. long and 3 m.m thick ; close by another larva was found, which, however, had not caused any disturbance.—(Prof. W. C. Schimmel and K. Over, in the *Tijdschrift voor Veeartsenijkunde*.)

THE NEW HAMPSHIRE STATE BOARD OF CATTLE COMMISSIONERS has issued an order that hereafter the examiners of cattle "must be regularly educated veterinary surgeons."

ENFORCEMENT OF NEW JERSEY'S VETERINARY LAW.—Hon. Francis J. Swayze, Justice of the Supreme Court, delivered the following charge to the Grand Jury of Hunterdon County at the September term: "My attention has been called to only one matter upon which it seems necessary that I should say a word to you. The legislature of the State of New Jersey, in the year 1902, passed 'An Act to regulate the practice of Veterinary Medicine,' and by that act provided that 'any person using any title or degree appertaining to the veterinary profession, or practicing veterinary medicine, surgery or dentistry in any of their branches in this State, after the first Monday in May, 1902, without being licensed and registered in conformity with the provisions of this act, or otherwise violating any of its provisions, shall be guilty of misdemeanor.' I am told that a case of that kind has arisen in this county. If the evidence justifies you in finding that such violation of the act of 1902 has taken place in the county of Hunterdon, if you find that veterinary medicine has been practiced without the license required by that act, or if you find that any other provision of the act has been violated, it will be your duty to find an indictment for that violation of that statute. I speak of this particularly because it is suggested that many gentlemen may think that the legislature was wrong in passing such an act. With that question you and I have nothing to do. We are here to enforce the law as the legislature has made it, and we would be derelict in our duty if we failed to enforce any act passed by the legislature of this State." The case referred to by Judge Swayze is that of "Dr." George Locke, the man whom President Lowe recently had arrested at Flemington, Hunterdon County, and held for the September term of the Grand Jury for practicing veterinary medicine in that county without a license as required by the law of 1902. As we go to press we learn that Locke *has been indicted* by the Grand Jury and placed under another bond, and that the Court reconvened Sept. 28th for the trial of the indictments found by the late Grand Jury of Hunterdon County.

ARMY VETERINARY DEPARTMENT.

This REVIEW department was opened in the March number, and its object was there explained—the betterment of the Army Veterinary Service, through affording a forum for the discussion of subjects in which army veterinarians are deeply interested, and which are at the same time of interest and value to veterinary readers generally. The profession, and particularly army veterinarians, are invited to contribute communications, original articles, items of news, etc.

SOME MORE THOUGHTS AND SUGGESTIONS ON ARMY VETERINARY LEGISLATION.

As will be seen elsewhere in the "Army Veterinary Department," both the army dental surgeons and the army chaplains are endeavoring to secure additional legislation in their respective branches at the coming session of Congress. This ought to be another incentive for us not to remain silent, from a possible failure to agree among ourselves, as such silence may be interpreted as a tacit conciliation with our present position and organization.

The receipt of several private letters from army veterinarians has forcibly reminded me of the fact, that we have now a larger number of young men in the service than ever before, and it seems to be clear that some of them have not, as yet, recovered from the first unpleasant impressions received in the military service. They present a list of complaints that are well understood by the older men, but they all seem to come to the conclusion that the panacea for all our ills is "rank." No doubt, rank would quickly heal many of the wounds inflicted upon the young army veterinarian, but it would not and could not bring relief to the extent apparently believed. I think that most of the veterinarians recently appointed do not sufficiently understand our position, both officially and socially, although they are now quite well defined. It would, therefore, be well for them to study the decisions and orders of the War Department as regards the status of the veterinarian, as given during the last three years, and they will find much to console them with our present position. On the other hand, they aspire to hopes and present suggestions that are altogether too far ahead of the actual conditions in our Army, partly because they do not

know or do not sufficiently appreciate our previous position in the Army, from which we have just emerged. But with this we must count, because its shadow has not yet vanished in the minds of many officers and men. Those of us who have advocated reorganization of the Army Veterinary Service for the past fifteen years or more, and those others who have lived through long years of perpetual struggles of veterinary legislation, with the diminutive result actually gained up to date, cannot possibly be optimistic as to the outlook for the near future. It takes years of experience in the Army to understand its spirit, traditions and conservatism, all of which is dominant in preventing our immediate success to right ourselves in our position in leaps and bounds. That our progress will be slow, that we have just begun our real struggles, and that we can only succeed by slow stages will be found to be true in years to come, when we can look backwards. To point for fair proof of this, let us look at the history of the army veterinary departments of the European armies with a hundred years of trials and failures, and with a gradual evolution as slow as it was won hard. That we shall fare better in the U. S. Army, the young enthusiast may hope, but the man of experience must doubt. This does not imply that we shall despair of effort, or rest where we stand, but we shall have to win by inches as in the military tug-of-war.

Looking about us trying to perceive where we really stand to-day in the Army, and taking the several decisions of the Secretary of War and of the Comptroller of the Treasury as a text, we cannot but admit that progress has been made at least in our personal standing. All of the older army veterinarians gladly acknowledge what the War Department has done for us, but the younger men cannot see things in that light, and grumble, although they have much less cause for it than had those who entered the Army years ago. Possibly most of the young men have not yet succeeded in finding their proper balance in the Army, or of establishing for themselves that position of confidence at their headquarters which comes with years of acquaintance with army officers, and with the adaptation of veterinary science and practice to the intricacies of the military service. Some of them may yet be over-sensitive in the often perplexing and vexatious relation with officers; others—and I fear a majority—overestimate our importance in the great economic organization of an army, where naturally the professional military officer comes first and everybody else next in

their various capacities. But many of the disagreeable features of army life and discipline fade away as one gets hardened to the service, and as they fade away they have helped to strengthen one's character, and to make one depend upon his own resources and merits and not on—rank. The chap that boasts upon his "rank" is pitifully small in proportion as his mental emptiness is great, whereas the man of good breeding and education, reared in a refined home and armored with a scholarly mind, will be readily acknowledged as a professional gentleman in all that the word implies, even if he is a veterinarian without rank.

Asking pardon for this introductory discourse to our young army colleagues, for which I have had ample cause, I shall come to business. The proposition before us remains the future organization of the veterinary service, as suggested by myself in the current issue of June, and by Drs. Power and Griffin in the issue of August. That we have to cut down again our organization-table, seems eminent. Recent private information is to the effect that there is little hope of passing any bills for personal advancement of any branches of the service during the coming session of Congress, but that there can be no objection of forwarding them for consideration by the War Department. It is also positively asserted that there is no intention to change our present position to that of a commission of a second lieutenant, but that it will be retained as at present as a preliminary position, but that, in time, the promotion to a first lieutenant may possibly be evolved after certain length of service and due examination. The positions of chief veterinarians are not mentioned as either contemplated or not contemplated.

I wish to state that this information is not from the War Department, but from a Congressman, who was on the Military Committee when our corps-bill was before the House; who has always been friendly to the veterinary cause, both in his State as a senator and later in Congress, and who knows where and how to get correct information. It is worth to me personally much as indicating what we may expect in the way of legislation and how soon we may expect it, but naturally it may not be so considered by others. That a future Secretary of War, or the reorganized General Staff, may entertain a different idea is possible, but not very probable, and we cannot deal in futurities.

On the actual basis of conditions as they present themselves to-day, our petition could go no further—without the risk of

being killed—than to ask for the promotion to the rank, pay and allowances of a first lieutenant, mounted, after five years of service, and due examination, and that from among those so passed the Secretary of War, or the General Staff (as Dr. Power suggested) shall select three first lieutenants and veterinarians to act as chief veterinarians, one for the Cavalry, one for the Artillery and one for the Quartermaster Department; that the assistant-veterinarians (the present veterinarians) if they do not attain promotion, he gives the privilege to retire on age or disability, and that they be allowed the 10% increase of pay for foreign service; that all contract veterinarians shall be graduates of reputable veterinary colleges or universities, and that the "farriers and horseshoers" who have passed the examination at the School for Farriers and Horseshoers at Fort Riley, Kansas, be promoted to "farrier-sergeants" on their return to their respective organizations.

Taking all the issues that confront us in the Army into calm consideration, I cannot think of any more just, reasonable or modest proposition than the above. It does not contain a shadow of a corps-bill; it presents an organization as small and modest as is at all compatible with the intelligent performance of professional services under our own expert supervision, it asks for no additional positions, but merely for a promotion with an insignificant increase in pay, and for some restrictions for the employment of contract-veterinarians that are absolutely necessary to preserve the integrity of the Army Veterinary Service.

I, therefore, ask *all* army colleagues to vote for the proposition through the pages of the REVIEW, so that we can proceed to draw up a petition, have it properly signed and forwarded through proper military channels. OLOF SCHWARZKOPF,

3rd U. S. Cavalry.

* * *

ARMY VETERINARY NOTES.

Proposed Legislation for Army Dental Surgeons and Chaplains.—It certainly is of interest to us to know that the "three examining and supervising dental surgeons" have forwarded a report and petition to the Surgeon General, U. S. A., setting forth the unsatisfactory position they occupy, and asking for the approval of a bill to give them an organization consisting of three majors, six captains, twenty-one first lieutenants and as many contract dental surgeons as may be needed, not to exceed thir-

ty. In reflecting upon this proposition without prejudice, we may acknowledge the fact that the position of the "contract dental surgeon" is not a *sine cura*. He is considered a civilian contracted by the Surgeon General for two to three years; he is moving from post to post practically without a home, with plenty of work but no fit place to work in, and without prospect of promotion if he wishes to remain in the Army. Even the veterinarian, although at the bottom of the list of officer's rank, outranks him officially. But the contract dental surgeon enters into the Army with \$25 more monthly salary than the veterinarian, and he has the allowance of the quarters of a first lieutenant. He occupies the same position as the contract surgeon, which is willingly accepted by many young physicians preparatory to entering into practice in civil life, or to prepare themselves for examination for the regular Army service. That such a promotion does not exist for the dental surgeons is explained by the fact that they are novices in our Army, that no other army as yet has seen the need of a regular dental service, and that their professional services have never been and cannot now be considered as of vital importance for an army in peace or war. This view becomes clear when we study military history, which demonstrates over and over again that in many wars whole armies were crippled and rendered helpless for further action by diseases of army horses, but nowhere do we find a record that such has ever occurred on account of diseased teeth of soldiers. Happily for mankind, no contagious diseases of teeth seem to exist that would kill men by the hundreds or thousands or make them totally unfit for work. This absence of great danger, alone, renders military dentistry of minor importance to the medical or veterinary services of an army. Another important point well worth considering, in a comparative light, is that of scientific education. No doubt the dentist is a fine, highly skilled, even admirable mechanic, but his medical education is limited by the natural, narrow sphere of its practical application. He has, for instance, no pathology or bacteriology to speak of, and in point of diversity of medical subjects, dental science is entirely out of comparison to the deep, complex problems that veterinary science has to meet in its modern application. It appears to us that our friends, the dental surgeons, have hit far above the mark in asking for an organization as mentioned above. They, like ourselves, have just complaints which will be understood and heard in time, but it is pretty safe to assert that they will be led into more modest channels of

hopes and desires. At least, our own experience during fifteen years of disappointment in army veterinary legislation makes us think so. The chaplains of the Army, too, will have a bill before the coming Congress to allow them the rank, pay and emoluments of majors after ten years of service. Although the chaplain enters the service in the most favored position of any officer of the Army, that of captain, and although his position is fairly well paid, respected, and not greatly responsible or over troublesome, he, too, feels that after years of service he ought to have a promotion, especially if he is in advanced age, as many of them are. Their claim is just, and it is understood that it has the approval of the Secretary of War, and we can only wish them God-speed in their endeavor for this rather modest advancement. (O. S.)

Dr. Walter Fraser, 13th Cavalry, writes us from Calamba, P. I., that he has advised all army veterinarians serving in the Philippine Islands of the renewed efforts for veterinary legislation, and he assures us that all are anxious to assist in any way that may help us to get a "commission."

In the Catalogue of the Kansas City Veterinary College for 1903-1904, just received, we find the creation of a new professorship, that of "military veterinary practice," with Dr. Sidney L. Hunter, 6th U. S. Cavalry, as lecturer. The synopsis of the lectures, as given in the catalogue, is as follows: "Since the position of the army veterinarian has been placed under a classified Civil Service, and appointments are made upon merit, students have taken a larger interest in this particular veterinary field. In order that students may prepare for this special service a course of twelve lectures is delivered, discussing the selection of horses for the different divisions of military service, the proper equipment and care of the horse in the field and at the post, the duties and official relations of the army veterinarian, and other matters related thereto." We congratulate the Kansas City Veterinary College on this new feature. It is thoughtful. Dr. Hunter is one of our most capable and trusted army veterinarians, and he will not only do full justice to his lectures, but his personality will help to attract the right kind of students into the army service. (O. S.)

Journal of the U. S. Cavalry Association.—Since the privilege has been accorded to army veterinarians to become members of the "U. S. Cavalry Association," every army veterinarian is bound in honor to accept this invitation by becoming a subscriber to the *Journal of the U. S. Cavalry Association*. There exists no journal in the United States so replete with in-

terest and information for the army veterinarian as this. All that is necessary is to address Captain L. C. Scherer, 4th Cavalry, Secretary U. S. Cavalry Association, Fort Leavenworth, Kansas, and inclose mail-order for \$2.00, upon the receipt of which the *Journal* will be quarterly mailed to the subscriber.

A Synopsis of the Report of Committee on Army Legislation of the A. V. M. A. will be found on page 646 of this issue.

New Army Veterinarians.—The following army veterinarians were recently appointed and assigned to the various regiments and stations: Andrew E. Donovan, Artillery Corps, Vancouver Barracks, Wash.; Walter R. Pick, 1st Cavalry, Fort Clark, Texas; James C. Reely, 7th Cavalry; Oscar M. Norton, Artillery Corps, Fort Leavenworth, Kas.; Burt English, 2d Cavalry, Fort Ethan Allen, Vt.; Robert W. McKibbin, 4th Cavalry, Fort Riley, Kas.—(*Army Journal*, Aug. 22, 1903.)

MASSACHUSETTS NEW VETERINARY LAW.

[CHAP. 249.]

AN ACT TO PROVIDE FOR ESTABLISHING A BOARD OF REGISTRATION IN VETERINARY MEDICINE.

Be it enacted, etc., as follows:

SECTION 1. The governor, with the advice and consent of the council, shall appoint five veterinarians, residents of this Commonwealth and graduates of a school of veterinary medicine recognized by the American Veterinary Medical Association, who shall constitute a board of registration in veterinary medicine. Their terms of office shall begin on the first day of January in the year nineteen hundred and four, and they shall hold office, one for one year, one for two years, one for three years, one for four years and one for five years, or until their successors are appointed; and the governor shall appoint annually thereafter, before the first day of December, beginning with the year nineteen hundred and four, one veterinarian, qualified as aforesaid, who shall hold office for five years from the first day of January next ensuing. Any member of said board may be removed from office for cause by the governor, with the advice and consent of the council. The members of the board shall each receive a salary of fifty dollars a year, and their necessary travelling and contingent expenses actually incurred in attending meetings of the board. The said salary and expenses shall be paid out of the treasury of the Commonwealth.

SECTION 2. The members of said board shall meet on the

second Tuesday of January in each year, at such time and place as they shall determine, and shall immediately proceed to organize by electing a chairman and a secretary, who shall hold their respective offices for the term of one year. Said board shall hold regular meetings on the first Tuesday of March, July and November of each year, and such additional meetings at such times and places as they may determine. Said board may make by-laws and rules not inconsistent with law necessary to carry out the provisions of this act.

SECTION 3. Said board shall notify all persons practicing veterinary medicine in this Commonwealth of the provisions of this act by publishing the same in one or more newspapers in this Commonwealth, and every such person who is a graduate of a recognized school of veterinary medicine, and also every person who has been a practitioner of veterinary medicine in this Commonwealth for a period of three years next prior to the passage of this act, shall, upon the payment of a fee of two dollars, be entitled to registration, and said board shall issue to him a certificate thereof signed by its chairman and secretary. Registration under the provisions of this section shall cease on the first day of September in the year nineteen hundred and four. All applications for registration under this act shall be made upon blanks furnished by the board, and shall be signed and sworn to by the applicant.

SECTION 4. Any person not entitled to registration as aforesaid who is twenty-one years of age shall, upon the payment of a fee of five dollars, be entitled to examination, and if found qualified by the board shall be registered and shall receive a certificate of registration as provided in section three. Any person who fails to pass a satisfactory examination and is therefore refused registration may be re-examined at any regular meeting of the board within two years of the time of such refusal, without additional fee, and thereafter may be examined at any regular meeting upon the payment of a fee of five dollars for each examination. The fees received for examination and registration of applicants before the board shall be paid monthly by the secretary of the board into the treasury of the Commonwealth.

SECTION 5. Examinations shall be held at least twice annually, and shall be exclusively in writing, in English. There shall be suitable questions to test the requisite knowledge of the applicants in the following subjects: Anatomy, surgery, physiology, animal parasites, obstetrics, pathology, bacteriology,

diagnosis and practice, therapeutics and materia medica.

SECTION 6. It shall be the duty of said board to keep a register of all practitioners qualified under this act, which shall be open to public inspection, and to make an annual report to the governor.

SECTION 7. It shall be unlawful after the first day of September in the year nineteen hundred and four for any person to practice veterinary medicine, or any branch thereof, in this Commonwealth who does not hold a certificate issued by said board.

SECTION 8. Any person not registered as provided by this act who shall practice veterinary medicine or any branch thereof in this Commonwealth shall be guilty of a misdemeanor, and shall upon conviction thereof be punished by a fine of not less than fifty dollars or by imprisonment for a term not exceeding two months, or by both such fine and imprisonment.

SECTION 9. The provisions of this act shall not be construed to prohibit advice or service, in a case of emergency, by a person not entitled to practice veterinary medicine under this act, and the provisions of section nine of chapter seventy-six of the Revised Laws relating to the practice of medicine within the Commonwealth by physicians and surgeons shall, so far as they may be applicable, apply to the practice of veterinary medicine or any branch thereof by veterinarians.

SECTION 10.—Except as otherwise provided herein this act shall take effect upon its passage. [*Approved April 16, 1903.*]

"EACH succeeding issue of the REVIEW seems to be an improvement, and I look for it regularly."—(*G. R. Young, D. V. S., Omaha, Neb.*)

THE great pressure upon our pages renders the holding over of a great mass of valuable papers and communications imperative. We ask the indulgence of our friends, and promise them as rapid attention as possible. We are now running under high pressure to relieve the situation.

"COMMON AILMENTS OF BREEDING CATTLE," by C. L. Willoughby, Dairyman, Georgia Experiment Station, Experiment, Ga., is a very valuable bulletin, intended to assist stockmen who have to rely upon their own resources in treating the diseases and accidents incident to breeding. It has a number of very comprehensive illustrations. There appears to be no veterinarian connected with the station. Our Southern veterinarians should see that Georgia gets into line.

CORRESPONDENCE.

THE ETIOLOGY OF FORGING—TWENTY-FIVE DOLLAR PRIZE
FOR THE BEST EXPLANATION OF ITS CAUSATION.

BALTIMORE, Sept. 17, 1903.

Editors American Veterinary Review:

DEAR SIRs:—There is a peculiarly-gaited horse which I have for many years called a "Crab," but he is generally known as a "*forg*er." I have never found anything in veterinary literature in relation to him. The only thing I ever saw was in a horse-shoers' book, and the author merely tells how to shoe him to prevent the forging. Now, Messrs. Editors, I enclose a check for twenty-five (\$25) dollars as a prize for an essay on this subject; the essays to be published in the REVIEW, and not less than six competitors to enter. The editors of the REVIEW are to appoint a committee which is to decide as to who wins the prize. The subject is to be considered from two standpoints:

- (1) Is the horse sound?
- (2) Where is the anatomical lesion, causing the trouble, located?

The essays are to be confined to the space allotted by the editors of the REVIEW, and they should be all in at a certain time—say, the first to be published in the December or January REVIEW.

Messrs. Editors, cut out the tuberculin test tables and societies' details, and give us a real live subject.

Trusting this will meet with your approval, I am

Yours fraternally,

WILLIAM DOUGHERTY.

[NOTE.—In conformity with the request of Dr. Dougherty, we assign the duty of deciding upon the merits of the anticipated responses the following well-known teachers of veterinary science: Prof. James L. Robertson, of the New York-American Veterinary College; Prof. W. L. Williams, of the New York State Veterinary College, and Prof. Joseph Hughes, of the Chicago Veterinary College. There will be allotted to each essayist one REVIEW page of solid reading matter, or 475 words. All essays must be in the hands of the editors by December 1, 1903. In the meantime, the check for \$25 is on deposit for the account of the REVIEW, and awaiting the above-named judges' decision. —EDITORS REVIEW.]

SOCIETY MEETINGS.

AMERICAN VETERINARY MEDICAL ASSOCIATION.

The fortieth annual meeting of this international organization convened in the Council Chamber of the City Hall, Ottawa, Canada, Sept. 1, 1903, at 10 o'clock A. M., President Dr. SESCO Stewart, of Kansas City, Mo., in the chair. The large hall was beautifully decorated with English and American flags, the folds intertwining in a manner to show the close ties of friendship and interest between the two English-speaking nations. Behind the chairman's platform, on either side, were portraits of President Roosevelt and King Edward, while between them, draped



PARLIAMENT BUILDING.

in mourning, was the picture of the late Prof. Eduardo Nocard, of France, an honorary member of the A. V. M. A. The room was well filled when the President's gavel fell, there being present the Mayor of the city, Minister of Agriculture of the Dominion, a large number of Ottawa aldermen, some members of Parliament, and other distinguished public men and private citizens, while the entire rows of rear seats, four or five deep,

were occupied by ladies, both visitors and the families and friends of local veterinarians.

President Stewart, in well chosen language, announced that the opening of this meeting marked a new era in the history of the Association, as it was the first time that it had ever assembled outside of the boundaries of the United States. He referred in complimentary terms to the Canadian members who have been associated with the organization for the past few years, and predicted a large yearly increase of members from that section, and a corresponding expansion of the interest and value of the work and influence of the Association.

He then introduced the Hon. Frederick Cook, Mayor of Ottawa, who welcomed the Association to the city in the most cordial terms, declaring that the municipality was wide open to receive the Association. His address was not only an extremely friendly one, but contained much that showed familiarity with the veterinarian's field, his aims and abilities, and was closed with a patriotic peroration in behalf of a closer union between the two countries.

Dr. D. E. Salmon, of Washington, D. C., was called upon on behalf of the Association to respond to the Mayor's welcome, and he did so in true Salmonian fashion, being at times gravely serious, at others provokingly amusing, but always forceful and interesting. He spoke of the habit which Americans had acquired of considering Canada such a northern land, and stated that, strange as it might seem, there were cities in Pennsylvania in the same latitude as some of the Canadian towns. This appeared to be such a hazardous statement that we observed several present make notes of the assertion with the evident intention of consulting a map when opportunity offered. The Doctor made the Canadians feel that their hospitality was appreciated, but assured them that the main object of our coming was for work, and work which meant not alone the advancement of our science, but the protection of the public health and the betterment of the human race.

Following these formalities, President Stewart read the annual address, as follows :

THE PRESIDENTIAL ADDRESS.

"The central purpose for which this Association has been maintained is the upbuilding of the veterinary profession, in America, on a broad and substantial basis of scientific capability and a high quality of citizenship. The Association, beginning 40 years ago in the City of New York, has steadily main-

tained the principal object, thereby winning an ever-increasing membership and a continuously widening influence. In 1890 its local character was made national through holding its annual meeting in Chicago and extending its membership over a wide area in the Northern States. From the date of that meeting until the present, growth and development have been marked by rapid strides. The central purpose as well as the scientific character of our Association has not been limited by boundary lines, either state or national. A cordial invitation has been extended to all qualified veterinarians to join in and have a part in promoting the welfare and the growth of this organization. Meeting places have been selected at points on or near the national boundary line that the veterinarians of the north country might find it convenient to attend the meeting and participate in the great work.

"To show more clearly the sincerity of its aims, and to remove any doubts which Canadian veterinarians may have entertained as to the breadth of purpose of this organization, in 1898 the name was changed from United States Veterinary Medical Association to American Veterinary Medical Association, and invitations to come and help were made still more pressing. The wisdom of this change in name is made manifest by the considerable number of Canadian veterinarians who have attended recent meetings and affiliated as active members. We believe this attendance and affiliation has brought much good to us and good to them. The very cordial invitation so graciously extended by Dr. Rutherford and his Canadian brethren to hold the 40th annual meeting in their capital city was accepted without reservation, and we have come to this meeting in the full assurance that we will be greatly benefitted, and in the hope that we may render a good service to the Dominion by interesting all her veterinarians in the work of this Association.

"Wherever our Association meetings have been held, confidence in, and appreciation of the great value and worth of the true veterinarian, is more firmly fixed in the public mind. Local veterinary organization and coöperation is greatly strengthened, resulting in much public good. The veterinarians individually are more thoroughly imbued with the intrinsic worth of their profession, and are stimulated to greater scientific growth and public virtue. The hope is entertained that our presence in Ottawa will fix more deeply in the minds of all veterinarians of the Dominion that this is an active, progressive, forceful and helpful scientific organization and one

which they can strengthen and render more useful by joining its ranks.

"This Association has always labored for a higher educational standard, and after years of discussion it determined to bring its influence to bear through setting a higher requirement for membership, which took effect January 1st, 1893. Gradually the stand taken by the Association made itself felt, and a number of veterinary colleges raised their standard so that graduates would be eligible to membership, and this achieved a great gain for our profession. In 1897 the United States Bureau of Animal Industry established a like standard for eligibility to enter the veterinary service in the Department of Agriculture. So potent was the combined influence of these two regulations that practically all of the veterinary colleges of the continent have announced the three-year standard. There remains but one college where students attend in any considerable numbers which has not yet yielded to the good influence of this upward movement, but it would seem that the time must be near at hand when even this one will recognize that its usefulness will be greatly enhanced by joining in the grand movement for giving the young veterinarians a more complete preparation for the great work before them than heretofore obtained.

"After thoughtful study of the situation I am convinced that this Association will be justified, nay, more, it becomes its duty not only to itself but to the oncoming recruits in the field of veterinary science, to more closely scrutinize the work of the several veterinary colleges. Notwithstanding that the managing officers or directors of the several colleges announce a course of instruction covering three terms of six months, or more, each, yet there is opportunity and temptation to evade the announcement and permit students to receive unearned credits for attendance or proficiency, and allow them to graduate with very imperfect qualifications. In this way, in part at least, they may evade the standard announced, yet give with their diplomas the coveted privileges of eligibility for admission into this Association, and the right to compete for appointment in the civil and military departments of State and National Government; also the right to practice in States where a three-term diploma is the passport to the privilege of practice.

"Our membership is now so widespread, our purposes so well defined, and our influence so strong that all honestly conducted veterinary colleges will grant access to their enrollment records

for examination by officers of this Association duly appointed to make such investigation. I recommend that the President be authorized and instructed to select, from the membership, persons conveniently near to each of the several colleges, whose duty it shall be to visit the colleges at least twice during a session and make lists of the students then enrolled and in attendance, showing in which of the three several collegiate years such students are enrolled; and in case of second and third term students giving basis for advanced standing; and to report their findings to the Secretary, or Committee on Intelligence and Education for permanent record. The visits of said investigators should be made soon after the opening of the college terms and approximately near the close of said terms; such scrutiny and recording will strengthen very greatly the hands of the governing bodies whose purpose it is to fully comply with the spirit of our membership requirements in this particular, as well as provide our organization with the data by which to determine the eligibility of future applicants for membership.

"There is an institution in Kansas City which holds forth to be a veterinary college and which has been issuing diplomas for several years past under conditions which this organization does not countenance. During the session of 1902-3 said institution had not to exceed 5 students in attendance during the part of the college term prior to the holiday season, yet on March 1st thereafter the newspapers gave public notice that that institution graduated 17. While that institution is not an accredited one by the A. V. M. A., the holders of its diplomas are admitted in the senior classes of some recognized veterinary colleges and graduated with one term's attendance. There is no data at our command by which it can be shown that such graduates are not eligible to membership in this body if they make application.

"You will recall that one of the conditions for membership in this Association applicable to those who matriculated after January 1st, 1893, was that they should be graduates of colleges requiring three terms instruction of six months each. It is known by all who have cared to investigate that few, if any of the colleges have lived up strictly to these requirements, and yet the Association has accepted their graduates as members. They have given full credit for attendance at a college which advertises its terms to be less than five and one-half months, and their diplomas have rendered the holder eligible for membership in this body.

"Five American colleges which heretofore required but two terms' attendance for graduation, have announced this year that hereafter they will require attendance of three terms of six months each, thus placing them in the list of recognized veterinary colleges. Let us as an Association do all that lies within our power to encourage these institutions in the maintainance of their new announcement at the highest possible degree of efficiency.

"Some of our members have already begun to advocate an increase in the length of college attendance for eligibility in this organization. While it is very desirable, and the older and financially well-established colleges may be able to carry out a four-year curriculum, this Association will do well to see to it first that its present requirements are lived up to in letter and in spirit before a proposed advance is made. The standard already achieved has been the result of 10 years of patient yet forceful pressure brought to bear by our membership, and it will be only when we have fully established our present regulation that we will be ready to take a step in advance. I believe we are in position to assist the various colleges in complying fully with the requirements for membership in this Association, and it is our duty to do so. I respectfully urge that this Association take action looking to the carrying out of a plan for visiting the colleges and compiling records before we close this meeting.

"Owing to the general prosperity which has overspread this country during recent years, and particularly through the enhancement of the value of domestic animals and the profitability of their production, the veterinary profession is everywhere enjoying a period of great prosperity. The worthy and competent veterinarian who has become established in any community finds his services in great demand, and there is a willingness on the part of the people to give him ample compensation for services rendered. The success attendant upon animal industry is very marked and the field for usefulness of the veterinarian very greatly extended. In the regions where the qualified man would have found meagre employment a few years ago there is now demand for many times the number who have located therein. In all that area extending from the Gulf of Mexico to the northern lakes of Canada there is a rapidly developing field for veterinarians and many years must elapse before this field will be fully occupied. It will give employment to thousands of properly qualified men. In the great State of Illinois there are between 25 and 30 counties in which no veterinary graduate resides, and

the people are obliged to depend upon non-graduate practitioners. The State of Missouri has 116 counties, and not counting those resident in its 3 large cities, there are less than a half hundred graduates to serve this vast area. There is every encouragement it seems to me for young men to enter the ranks of the veterinary profession, and still greater encouragement if they seek that thorough and practical veterinary training which will fit them to meet the demands of this immense and rapidly growing agricultural interest. This organization can do the profession at large and future members a great service by instilling into the minds of students an ambition to acquire the highest possible training and to maintain the highest degree of personal integrity.

"Our Association maintains a code of ethics and requires that each applicant for membership shall accept the code as a condition for admission. There is no doubt but that such code of ethics is very useful and tends largely to maintain a friendly and professional relation between the members and aids greatly in marking a distinction between a right-minded professional man and a charlatan. Ethics is a problem of education and in some of the colleges, if the graduates are to be believed, students are led to understand that it is not beneath the dignity nor unbecoming a veterinarian to resort to sharp practice in dealing with his clients, also his competitors. If there are men in our profession who pose as teachers and who do not set forth by precept and example that sterling integrity and honesty of purpose which should guide the action of the young veterinarian, members should take this into account when recommending students where to seek instruction. When young veterinarians who have received bad tutelage become applicants for membership in this organization, they are wont to believe that the code of ethics was simply made to direct the stupid and enhance the opportunities of the shrewd. There is a duty on the part of our membership, especially the older ones, to bring to bear every rightful influence in directing the new members, who do not seem to appreciate or realize the wholesome moral and professional influence of the maintenance of our code. They should feel that the younger member would willingly do what he could to maintain a high standard of ethics if he fully appreciated its import. In several of our large cities the neglect of attention to this matter, coupled with the weakness and perversity of violators of the code, has wrought professional dissension and converted bodies of veterinarians who should have been on terms of

friendly coöperation into antagonism with each other, and opened the way to general discord and professional vagaries. Let us feel that we are in some way responsible or at least obligated to use our personal influence in overcoming these conditions and bring about friendship and coöperation.

"Each year adds to the number of States in which laws regulating veterinary practice are enacted and a wholesome regulation of the same gradually brought about. Colorado and North Carolina have been added to the list of States having practice laws and much credit is due to the few active veterinarians in these commonwealths in securing such legislation. Failures to secure such laws in other States does not necessarily reflect upon the veterinarians therein, because local conditions sometimes make impossible the procurement of righteous laws for the time being. Let us give our moral support to members in these States; it will encourage them and help them to final success.

"True fraternity is developed by closer relationship in duties and responsibilities as well as through verbal obligations and social amenities. Our highly esteemed ex-President, Dr. A. Liautard, has by voice and pen pointed out an opportunity to strengthen our fraternal bonds through a mutual organization for bearing a part of the burden of misfortune by accident or death which may be the lot of some fellow-member. Dr. Wm. Dougherty, our old-time friend and professional brother, will offer during this meeting a plan for carrying into effect an organization for mutual benevolence, and I most heartily commend it to your consideration. While the professional labors of the veterinarian involves some hazard of life and limb, present knowledge of sanitary precautions, coupled with modern appliances for restraint of animals, has greatly lessened the hazard. Notwithstanding the changes just noted, corporations offering accident and life insurance class the veterinarian in the extra-hazardous list, which places him at great disadvantage from an insurance point of view. Through a rightly planned organization we can secure for ourselves protection at actual and reasonable cost, and provide for dependent ones in times of greatest need.

"The establishment of a clinic as a phase of the work of this Association has served to fix more clearly the purpose of this organization to make its scientific labors of tangible value to members engaged in general practice. With each succeeding year the clinics should be made to include a greater variety

of cases, to include what are termed medical as well as surgical cases, and when possible cases demonstrating papers presented. The clinics have added a living, vital force to our meetings, and every member should take a personal interest in enhancing their value and ensuring their perpetuity.

"For several years past a number of the most active workers in this Association who are connected with state educational institutions have found it extremely inconvenient if not impossible to attend our meetings, because they occur on the same date fixed by the colleges and universities for the opening of the collegiate year. A proposal to change the by-laws by making the date of meeting earlier in the year, will come up for consideration during this meeting. While it is quite certain that no date can be fixed which will not make it inconvenient for some member to attend, I believe the date could be made one or even two weeks earlier with great advantage to the Association, yet without special inconvenience to the membership in general.

"Every member must observe with gratification the increase in number of ladies who accompany the members and visiting veterinarians to our meetings. Their presence not only contributes an indescribable charm which causes all to look forward with great pleasure to each annual meeting, but also wields a moral force which is doing much to dispel from the public mind an old time impression that the members of the veterinary profession are an ungentlemanly class and their profession an unworthy one. We believe in the ladies; let them help us grow better and more worthy. Let us continue to make our meetings most pleasant outings for them.

"The splendid programme prepared for this Association, including as it does papers bearing on all phases of the veterinarian's life work, indicates the great vitality of this Association. It is also a monument to the energy and faithfulness of our most efficient Secretary. The preparation for our clinical division, also the hospitable arrangements made for our entertainment, merits unstinted praise for our Local Committee of Arrangements. This magnificent gathering of veterinarians from all points of the compass insures a full and free discussion of the problems to be presented here. Everything seems to conspire to make this a grand and successful meeting. I feel confident of your hearty coöperation in the duties before us at this time, and I believe we shall ever remember the Ottawa meeting as one of unusual value and inexhaustible pleasure."

THE ATTENDANCE.

The calling of the roll was dispensed with, as is the custom at these meetings, and the names of those in attendance were obtained by means of registry cards, which members and visitors were solicited to sign upon entering the hall. The following is the official list of those in attendance, as furnished to the Publication Committee. It is more than likely that quite a number failed to register, as many came to the meeting during the last two days, when the vigilance of those in charge of that work had greatly relaxed.

Members.—S. W. Thayer, Dunham, Que. ; E. C. Porter, Newcastle, Pa. ; M. C. Baker, Montreal, Que. ; Jno. F. Burnett, Ft. McLeod, N. W. T. ; E. J. Nesbitt, Poughkeepsie, N. Y. ; Geo. M. Walrod, Storm Lake, Ia. ; P. A. Fish, Ithaca, N. Y. ; A. H. Hall, Quebec ; J. D. Duchene, Quebec ; Geo. W. Bell, Kingston, Ont. ; A. R. Metcalfe, Vankleek Hill, Ont. ; Geo. Waddle, Kalamazoo, Mich. ; R. Kerr, Kaukauna, Wis. ; J. W. Jamison, Paris, Ky. ; G. H. Belaire, Pembroke, Ont. ; Wm. McGuire, Cornwall, Ont. ; D. Gorsuch, Glencoe, Md. ; J. A. Couture, Quebec ; D. McQuaig, Moncton, N. B. ; A. S. Cooley, Cleveland, O. ; A. S. Morrison, Chesterville, Que. ; James Law, Ithaca, N. Y. ; C. E. Zuber, Lawrence, Mass. ; B. D. Pierce, Springfield, Mass. ; Geo. S. Fuller, Lawrence, Mass. ; W. Runge, Newark, N. J. ; F. F. Brown, Kansas City, Mo. ; D. E. Sawyer, Kansas City, Kan. ; D. M. McDonald, Brainerd, Minn. ; Wm. Henry Kelly, Albany, N. Y. ; V. A. Moore, Ithaca, N. Y. ; A. M. Wray, Richmond, Ill. ; Wm. Stubbs, Caledon, Ont. ; Thos. Thacker, Renfrew, Ont. ; G. A. Knapp, Millbrook, N. Y. ; O. G. Noack, Reading, Pa. ; A. S. Wheeler, Biltmore, N. C. ; Lemuel Pope, Jr., Portsmouth, N. H. ; Chas. Winslow, Rockland, Mass. ; J. H. Roberts, Northampton, Mass. ; L. H. Howard, Boston, Mass. ; R. W. Kenning, Pembroke, Ont. ; D. McAlpine, Brockville, Ont. ; G. A. Hay, Campbellford, Ont. ; Jos. Plaskett, Nashville, Tenn. ; A. E. Moore, Ottawa ; C. J. Marshall, Philadelphia ; G. E. Leech, Winona, Minn. ; T. E. Robinson, Westerly, R. I. ; J. H. Tennent, London, Ont. ; J. F. Quin, Brampton, Ont. ; H. F. Palmer, Detroit, Mich. ; Roscoe R. Bell, Brooklyn, N. Y. ; J. L. Robertson, New York ; S. H. Ward, St. Paul, Minn. ; J. E. Ryder, New York ; W. F. Heyde, St. Louis, Mo. ; Geo. McGillivray, Spring Valley, Minn. ; Wilson Huff, Rome, N. Y. ; Wm. H. Dodge, Leominster, Mass. ; D. E. Salmon, Washington ; Wm. Jakeman, Halifax ; J. A. A. Lefebre, Victoriaville, Que. ; John J. Repp, Philadelphia ; Tait

Butler, Raleigh, N. C.; A. A. Etienne, St. Hyacinthe, Que.; R. D. Scurfield, Crystal City, Man.; E. H. Shepard, Cleveland, O.; D. King Smith, Toronto; F. Fisher, Carleton Place, Ont.; J. F. Winchester, Lawrence, Mass.; C. Heath Sweetapple, Toronto; G. W. Loveland, Torrington, Conn.; A. H. Baker, Chicago, Ill.; Joseph Hughes, Chicago, Ill.; F. Torrance, Winnipeg; E. L. Quitman, Chicago, Ill.; J. J. Richardson, Marcus, Ia.; W. Horace Hoskins, Philadelphia; M. H. Reynolds, St. Anthony Park, Minn.; S. Stewart, Kansas City, Mo.; M. E. Knowles, Helena, Mont.; J. G. Rutherford, Ottawa; Wm. Herbert Lowe, Paterson, N. J.; W. W. Boucher, Ottawa; E. Burget, Norwalk, Ohio; J. T. Glennon, Newark, N. J.; Geo. H. Berns, Brooklyn, N. Y.; C. R. Simpson, Somerville, Mass.; John V. Newton, Toledo, O.; S. Brenton, Detroit, Mich.; W. J. Hinman, Winnipeg, Man.; Thos. S. Allen, Brockville, Ont.; Wm. Dougherty, Baltimore, Md.; A. W. Harris, Ottawa; R. P. Lyman, Hartford, Conn.; Chas. H. Perry, Worcester, Mass.; C. H. Playdon, Reading, Mass.; T. E. Smith, Jersey City, N. J.; Chas. E. Cotton, Minneapolis, Minn.; W. C. Holden, Delphos, O.; J. S. Butler, Minneapolis, Minn.; Chas. H. Higgins, Ottawa—(103).

Visiting Veterinarians.—H. S. Smith, Albion, Mich.; M. B. Perdue, Chatham, Ont.; G. W. Orchard, Windsor, Ont.; L. Mulligan, Manstick, Canada; J. D. Irvine, Vankleek Hill, Ont.; G. Hess, Ashland O.; D. A. Irvine, Maxville, Ont.; G. A. Kennedy, Ottawa, Ont.; J. H. Engel, Milverton, Ont.; G. W. Higginson, Rockland, Ont.; H. Bradshaw, Napanie, Ont.; A. D. Stewart, Ailsa, Ont.; C. W. J. Haworth, Eagansville, Ont.; Andrew Smith, Toronto, Ont.; C. Bahret, Poughkeepsie, N. Y.; Wm. Dann, Granton, Ont.; M. Gallivan, Iroquois, Ont.; S. J. Thompson, Winnipeg, Man.; A. W. Wiert, Greeville, Pa.; John Wilson, Wingham, Ont.; J. Pickel, Drayton, Ont.; W. C. Young, Allmand; James Smellie, Eureka, Ill.; Daniel Le May, Fort Douglass, Utah; P. A. Dillahun, Springfield, O.; J. J. Fyle, Brantford, Canada; Jno. H. Wilson, London, Ont.; J. D. Robinson, Washington, D. C.; J. M. Simpson, Cincinnati, O.; D. J. McKillop, Forester's Falls, Ont.; H. E. Marshall, Ottawa; M. A. Whimster, Hannata, Manitoba; Jesse A. Viles, Lowell, Mass.; J. B. R. Telmosse, Maniwaki, Canada; L. J. Turner, Winsted, Conn.; D. H. Weaver, Mount Forest; P. T. Bowlby, Tweed, Ont.; Chas. E. Magill, Haddonfield, N. J.; H. Young, Cobden, Canada; A. I. Telmosse, Hull; J. J. McGuiger, Ottawa; Wm. Lawson, Dundac, Ont.; M. G. Connolly, Burks Falls; R. H. McKenna, Pecton, Ont.; J. D. Whyte, Ottawa; John Tywell,

Mackinac Falls, Ont. ; S. Kennedy, Wakefield, Ont. ; J. B. Hollingsworth, Ottawa ; D. A. Bonesteel, Frankford ; A. E. James, Ottawa ; B. F. Butler, Marmora, Ont.—(51).

Ladies and Children.—Mesdames W. Moore, Ottawa ; W. Lawson, Dundas, Ont. ; H. E. Marshall, Ottawa ; A. S. Morrison, Chesterville, Que. ; G. M. Walrod, Storm Lake, Ia. ; W. Runge, Newark, N. J. ; Geo. Waddle, Kalamazoo, Mich. ; W. McLean, Buffalo, N. Y. ; G. A. Knapp, Millbrook, N. Y. ; A. Anderson, Ottawa ; Julia L. Choate, Cleveland, O. ; Flora A. Cooley, Cleveland, O. ; A. W. Wier, Greenville, Pa. ; John Wilson, Wingham, Ont. ; D. McDonald, Brainerd, Minn. ; W. I. Bevoley, Ottawa ; John J. Repp, Philadelphia ; Daniel LeMay, Fort Douglas, Utah ; A. H. Baker, Chicago ; John V. Newton, Toledo, O. ; G. Ed. Leech, Winona, Minn. ; W. J. Hinman, Winnipeg ; J. E. Ryder, New York ; C. J. Marshall, Philadelphia ; T. E. Smith, Jersey City, N. J. ; A. E. Moore, Ottawa ; A. A. Etienne, St. Hyacinthe, P. Q. ; Geo. H. Berns, Brooklyn, N. Y. ; H. F. Palmer, Detroit, Mich. ; S. Brenton, Detroit, Mich. ; Roscoe R. Bell, Brooklyn, N. Y. ; A. Quin, Brampton, Ont. ; J. Robinson, New York ; J. D. Robinson, Washington ; J. B. Hollingsworth, Ottawa ; J. G. Rutherford, Ottawa ; A. W. Harris, Ottawa ; A. E. James, Ottawa ; Chas. H. Higgins, Ottawa ; W. Horace Hoskins, Phila., Pa. ; H. Brooks, Philadelphia ; Wm. Herbert Lowe, Paterson, N. J. ; S. Stewart, Kansas City, Mo. ; C. R. Simpson, Somerville, Mass.—(44).

Misses : Ellen Glennon, Newark, N. J. ; Dorothy Rutherford, Ottawa ; Beatrice Barber, Ottawa ; M. Gertrude Huff, Rome, N. Y. ; Nellie Carroll, St. Paul, Minn. ; Nellie C. Berns, Brooklyn, N. Y. ; Y. Bevoley, Ottawa ; C. E. Boucher, Ottawa ; —Quin, Brampton, Ont. ; Bertha A. Marshall, Ottawa ; Lucy Cooley, Cleveland, O. ; Ellen Cooley, Cleveland, O. ; Kathleen Gilmour, Ottawa.—(13).

Masters : Hollingsworth Bell, Brooklyn, N. Y. ; Richard Cooley, Cleveland, O. ; Bellmont Bell, Brooklyn, N. Y. ; Harold C. Repp, Philadelphia ; Cyril Repp, Philadelphia.—(5).

Other Visitors.—W. I. Bevoley, M. D., Ottawa ; J. E. McPherson, Ottawa ; J. E. Ashworth, Alderman, Ottawa ; Chas. H. McVeigh, Vars, Ont. ; J. M. Lavaie, Ottawa ; A. Angel, Ottawa ; Mark White, Jr., Nashville, Tenn. ; Col. Thompson, M. P., Ottawa ; Geo. Duncan, Ottawa ; Senator Owens, Ottawa ; Alderman Slattery, Ottawa ; Senator Perley, Woolsley, N. W. T. ; McLeod Stewart, Ottawa ; H. A. Huber, Ottawa ; L. W. Whitney, Ottawa ; M. Plouffe, Alderman, Ottawa ; John Galbraith,

Ottawa, Ont.; Wm. Cole, Ottawa; W. Cunningham, Ottawa; P. J. Lynchke, Carp, Ont.; J. Frederick, Rockland, Ont.; L. A. Brown, Aylmer, P. Q.; Geo. W. Rogers, Ottawa; John D. Reid, Pres. Board of Trade, Ottawa; Geo. Howell, Vernon, Ont.; Senator W. C. Edwards, Rockland, Ont.; J. E. Dent, Ottawa, Ont.; J. H. Davis, Chicago; C. George, Ottawa; P. Prevost, Chief Fire Dept., Ottawa; I. C. Enright, Alderman, Ottawa; J. Benning, Ottawa, Ont.; Harry Taylor, Rockland, Ont.; Rev. Dr. W. Moore, Ottawa; Reginald Wilson, Rockland, Ont.; Mr. Sparks, Ottawa; A. C. Mitchell, Ottawa; L. Blume, Ottawa; John M. Farquhar, Lynn, Mass.; M. C. Nicoll, Ottawa; Lieutenant M. Loveken, Ottawa; Senator King, St. Johns, N. B.; C. P. Drevor, Ottawa; W. S. Prodrick, M. D., Ottawa; G. H. Richardson, Ottawa; Capt. Elliott, Ottawa; A. J. Jacobsen, Frederickstad, Norway; Arch McCormick, Ormstown, Ont.; J. L. Baskem, M. D., Ottawa; Chas. Little, Winnipeg; Jabel Robinson, M. P., West Elgin, Ont.; Senator Legris, Quebec; John C. Grant, Alderman, Ottawa; D. M. Robertson, M. D., Ottawa; Wm. Saunders, M. D., Ottawa; N. Boyd, M. P., Ottawa; W. C. Grant, Ottawa; Hon. Sidney Fisher, Minister of Agriculture, Ottawa; Hon. G. F. O'Holloran, Deputy Minister of Agriculture, Ottawa; F. Montizambert, M. D., Dir. Gen. Public Health, Ottawa; Alex Eger, Chicago; Wm. F. Powell, Ottawa; Hon. Fred Cook, Mayor, Ottawa; Col. A. S. James, Ottawa; F. M. Journeaux, Alderman, Ottawa; Zan Cotter, Chicago; F. O. Hanly, Ottawa; L. McFarlane, Ottawa; M. A. Waller, Ottawa; Sir James Grant, M. D., Ottawa; T. S. Sproul, Markdale, Ont.; T. Payment, Alderman, Ottawa; J. O. George, Camden, N. J.; A. L. Mattice, Ottawa; J. P. Dunlop, Ottawa; G. McClymont, Ottawa; Robt. S. Taylor, St. Paul, Minn.; W. R. Stroud, Alderman, Ottawa; H. P. Brooks, Philadelphia; E. V. Wilcox, Ph.D., Washington; Chas. F. Kent, Worcester, Mass.; Sam Rosenthal, Alderman, Ottawa; John Henderson, Ottawa; A. G. Pattenday, Ottawa; W. C. Young, Almont, Ont.; Thos. Potter, M. D., Ottawa; H. Manley, Ottawa.—(87).

EXECUTIVE WORK.

The Executive Committee sent in its recommendation that Dr. D. P. Yonkerman, of Kalamazoo, Mich., and Dr. M. H. McKillip, of Chicago, Ill., be cited to appear at the next annual meeting to answer charges of violation of the Code of Ethics, and the recommendations were adopted.

The Committee had considered the cases of several members

who had been advertising by means of extravagant circular-letters and posters, and they recommended that resolutions specially condemning this practice be adopted by the Association, and that a copy be sent to each of the offenders. This the Association did, and the resolution covering the point will be found in the report of the Resolutions Committee.

By their recommendation, the resignation of Dr. W. C. Fair, of Cleveland, Ohio, was not accepted, and he was cited to appear at the next meeting to answer charges.

The resignation of Dr. A. G. Kern, of Philadelphia, Pa., was not accepted because of delinquency in dues.

The Association accepted the resignations of Dr. W. J. Martin, of Kankakee, Ill., Prof. D. S. White, of Columbus, Ohio, and Dr. F. L. Kilborne, of Kelloggsville, N. Y.

The Committee reported in the matter of the letter presented by Dr. Claude D. Morris, of New York, at the last meeting in reference to his expulsion that it be deferred until later in the meeting; but it was not, so far as we know, again referred to.

At various times reports from the Executive Committee were received, and were invariably acted upon according to its recommendations. They consisted chiefly of applications for membership, and the results will be found in the long list of members elected.

Drs. F. D. Eiseman, John McBurney, M. H. Manley, and F. S. Schoenleber were suspended for non-payment of dues, and a number of others were given thirty days within which to make their peace with the Treasurer.

Charges were preferred against Drs. H. B. Clute, — Carter and Dr. Austin Peters for violation of the Code of Ethics, and they were cited to appear at the next meeting.

The Secretary read a number of invitations from various cities to the Association to hold their next meeting there. Niagara Falls and Chattanooga, Tenn., were solicitous of our decision in their favor, but St. Louis was dead in earnest, invitations coming from the veterinarians, the Council, Mayor, Board of Trade, etc., and a vote of the Association recommends to the Executive Committee that St. Louis be selected for the meeting of 1904.

Librarian Williams rendered his report in detail, and closed with his resignation; but the Association would not receive it, and the Secretary was instructed to urge Dr. Williams to retain his position.

A number of papers were read by title and referred to the

Publication Committee, but many whose names appeared on the programme failed to be present or to send in their communications. Those which were read by title were as follows: "Veterinary Dentistry; Its Use and Abuse," by Dr. T. S. Childs; "An Outbreak of Epizootic Encephalitis of the Horse in South Carolina," by Dr. G. E. Nesom; "Nitroglycerine," by Dr. S. S. Whitbeck; "Ictero-Hæmaturia of Sheep," by Dr. H. P. Johnson; and contributions from Drs. E. Perroncito, Turin, Italy, and James Desmonde, Adelaide, Australia.

NEW MEMBERS ELECTED.

At the various sittings of the Executive Committee a very large number of applications for membership were considered. All that were favorably recommended by the Committee were elected. The following is the official list:

Active Members Elect.

- J. M. Douglas (Ont. V. C., 1894), Hendrum, Minn.
- J. Butters (Ont. V. C., 1894), Renville, Minn.
- Jno. Spencer (Ont. V. C., 1886), Blacksburg, Va.
- Edgar W. Powell, (Univ. of Pa., 1900), Bryn Mawr, Pa.
- S. H. Gilliland (Univ. of Pa., 1901), Philadelphia, Pa.
- T. S. Carlisle (Univ. of Pa., 1901), Philadelphia, Pa.
- W. J. Storm (Univ. of Pa., 1897), Philadelphia, Pa.
- W. R. Andress (Univ. of Pa., 1900), Philadelphia, Pa.
- H. K. Copithorn (Univ. of Pa., 1903), Natick, Mass.
- B. T. Woodward (Univ. of Pa., 1902), Oxford, Pa.
- D. D. McNaughton (McGill Univ., 1893), Webster, N. D.
- A. G. Hopkins (Ont. V. C., 1891; Ia. St. Col., 1899), Vancouver, B. C.
- Geo. H. Glover (Ia. St. Col., 1885), Fort Collins, Colo.
- T. Falconer (Ont. V. C., 1894), Alexandria, Minn.
- H. Baker (R. C. V. S., London, Eng., 1875), Walla Walla, Wash.
- A. R. Ward (N. Y. S. V. C., 1901), Berkeley, Calif.
- Carl W. Fisher (Ont. V. C., 1898; N. Y. S. V. C., 1901), San Mateo, Calif.
- John D. Duchene (Laval Univ., 1887), Quebec, Can.
- J. A. Couture (Montreal V. C., 1873), Quebec, Can.
- A. W. Harris (Montreal V. C., 1880), Ottawa, Can.
- John Wilson (Ont. V. C., 1888), Leamington, Ont.
- A. E. Moore (McGill Univ., 1894), Ottawa, Can.
- F. D. Ketchum (C. V. C., 1893), So. St. Paul, Minn.
- Otto G. Noack (Berlin, 1890), Reading, Pa.
- R. N. Mead (Ohio St. Univ., 1895), St. Paul, Minn.

- H. D. Paxson (Univ. of Pa., 1893), Fort Worth, Tex.
 A. M. Wray (C. V. C., 1900), Richmond, Ill.
 James Graham (R. C. V. S., Edinburgh, 1886), Philadelphia, Pa.
 Chas. Winslow (Montreal V. C., 1879), Rockland, Mass.
 A. J. Tuxill (N. Y. C. V. S., 1894), Auburn, N. Y.
 H. W. Boyd (A. V. C., 1897), Nyack, N. Y.
 R. W. Kenning (Ont. V. C., 1872), Pembroke, Ont.
 G. A. Hay (Ont. V. C., 1895), Campbellford, Ont.
 F. F. Brown (C. V. C., 1892; K. C. V. C., 1902), Kansas City, Mo.
 Geo. Waddle (Ont. V. C., 1885), Kalamazoo, Mich.
 Thos. A. Allen (Ont. V. C., 1874), Brockville, Ont.
 J. T. Duncan (Ont. V. C., 1872), Toronto, Ont.
 Fred Fisher (Ont. V. C., 1881), Carleton Place, Ont.
 D. McAlpine (McGill Univ., 1894), Brockville, Ont.
 Alex. H. Hall (McGill Univ., 1894), Quebec, Can.
 W. C. McGuire (McGill Univ., 1893), Cornwall, Ont.
 E. Hanshaw (A. V. C., 1880), Brooklyn, N. Y.
 D. Fisher (Ont. V. C., 1893), Grandin, N. D.
 C. A. Clawson (Ohio St. Univ., 1900), Kansas City, Kan.
 W. W. Boucher (Ont. V. C., 1889), Ottawa, Ont.
 D. McCuaig (Ont. V. C., 1892), Moncton, N. B.
 B. A. Sugden (McGill Univ., 1897), Montreal, Can.
 W. H. Perrigo (McK. V. C., 1901), Milwaukee, Wis.
 W. H. Pethick (Ont. V. C., 1897), Central Bedique, P. E. I.
 D. Gorsuch (U. S. C. V. S., 1902), Glencoe, Md.
 J. H. Tennent (Ont. V. C., 1874), London, Ont.
 C. A. Mack (Ont. V. C., 1901; McK. V. C., 1902), Stillwater, Minn.
 R. D. Scurfield (McK. V. C., 1901), Crystal City, Man.
 Geo. S. Fuller (Harvard Univ., 1894), Lawrence, Mass.
 John V. Newton (Ont. V. C., 1878), Toledo, O.
 M. M. Leach (Ont. V. C., 1889), Lexington, Ky.
 J. W. Rollings (Ont. V. C., 1891), Lexington, Ky.
 J. Desmond (Melbourne V. C., 1887), Adelaide, S. Australia.
 F. H. Schneider (Nat'l V. C., 1896), Philadelphia, Pa.
 R. Kerr (C. V. C., 1894), Kaukauna, Wis.
 J. F. Quin (Ont. V. C., 1883), Brampton, Ont.
 E. P. Althouse (Univ. of Pa., 1903), Hagersville, Pa.
 C. Heath Sweetapple (Ont. V. C., 1869), Toronto, Ont.
 Jno. F. Burnett (Ont. V. C., 1880), Fort McLeod, N. W. T.
 Chas. A. McKim (C. V. C., 1899), Norfolk, Neb.

Wm. Stubbs (Ont. V. C., 1868), Caledon, Ont.
 Jos. A. A. Lefebvre (Laval Univ., 1896), Victoriaville, P. Q.
 A. Dauth (Laval Univ., 1889), Coteau du Lac, P. Q.
 C. E. Derome (Laval Univ., 1903), Crysler, Ont.
 J. Black (Ont. V. C., 1894), Richmond, Mich.
 D. E. Sawyer (K. C. V. C., 1903), Howard, Kan.
 Thos. Thacker (Ont. V. C., 1891), Ottawa, Can.
 A. S. Morrison (Ont. V. C., 1891), Chesterville, Ont.
 Geo. H. Belaire (Ont. V. C., 1891), Ottawa, Ont.
 J. Massie (Ont. V. C., 1879), Kingston, Ont.
 A. Joly (Laval Univ., 1890), Waterville, Me.
 F. T. Daubigny (Laval Univ., 1889), Montreal, Can.
 J. B. Clancy (C. V. C., 1892), E. St. Louis, Ill.
 A. R. Metcalfe (Ont. Vet. C., 1896), Vankleek Hill, Ont.
 J. H. Roberts (Montreal V. C., 1888), Northampton, Mass.

Reinstated to Active Membership.

Stephen L. Blount (Univ. of Pa., 1898), Fort Worth, Tex.
 Richard Ebbitt (Glasgow V. C., 1881), Grand Island, Neb.

Honorary Members Elected.

Prof. J. George Adami, Montreal, Canada.

REPORTS OF COMMITTEES.

The Finance Committee, through Chairman J. E. Ryder, reported having carefully gone over the books of the Treasurer and that they were correct.

The Committee on Publication reported through Chairman Reynolds, making a full statement of its work during the past year, and making some recommendations to increase its efficiency. These will be found in "Proceedings" for 1903.

The Committee on Intelligence and Education made only a partial report. It was somewhat of a disappointment to the members, who recognize the importance of the work intrusted to it. Chairman Ackerman, in a letter to the Association, merely told of the difficulty which he had experienced in endeavoring to get his committee to perform the work assigned to them, and of his futile efforts to obtain data from the various colleges. As bearing upon this subject, President Stewart made some pertinent suggestions in his address. Committeeman Dr. A. T. Peters, of Nebraska, however, forwarded a very creditable report with special reference to veterinary literature and libraries, which was read by the Secretary.

The Committee on Diseases failed to make a report, a tele-

gram from Chairman Pearson announcing his inability to be present.

The report of the Committee on Army Legislation was read by Chairman Lowe. He announced the impending change in the head of the United States Department of War, and commended the "Army Veterinary Department" of the REVIEW, as tending to assist the members of the veterinary service in coming to an understanding as to their needs and desires in the matter of elevation and legislation. He also incorporated in his report the order of the President (see September REVIEW) in reference to efforts to effect legislation by employes of the Government. He suggested that it was a question of expediency whether the demands of the Army veterinarians should pass directly to the Secretary of War through official channels, or whether they should be first submitted to this Committee for approval.

The Pharmacopœia Committee submitted as its report a letter from Dr. E. M. Ranck, of Natchez, Miss., its Chairman, in which he frankly acknowledged his inability to understand the scope and character of the work which the Association demanded of his committee. Considerable discussion ensued, and was participated in by Drs. Bell, Salmon, Hoskins, and others. At its conclusion it was apparent that nothing could be accomplished by the Committee, and Acting Chairman Bell asked that it be discharged. This, however, was not done, and it is likely that next year's report will be similar to the one just rendered.

The Committee on Standard of Excellence and Soundness was a little at sea when called upon for its report, the two members present (Drs. Berns and Reynolds) not having a clear idea as to who was chairman. Later in the meeting Dr. Reynolds read a report bearing upon points in judging. This committee has been strengthened for the coming year, and at the next meeting it will undoubtedly give a good account of its stewardship.

RESOLUTIONS ADOPTED.

The Committee on Resolutions reported the following and they were unanimously adopted :

On the Death of Prof. Nocard.

WHEREAS, We have learned of the death of Prof. Eduardo Nocard, of Alfort, France, an honorary member of the American Veterinary Medical Association, and

WHEREAS, His distinguished services to medical science

and to mankind have been of inestimable value to the world, and particularly to veterinary medicine, Therefore be it

Resolved, That we hereby express our sense of the great loss sustained by our profession and the world at large.

Thanks to Senator Edwards.

Resolved, That the thanks of the Association are due and are hereby tendered to Senator Edwards for his most excellent paper on the Bang System for the control of tuberculosis and that we endorse it as strictly in line with the consensus of advanced veterinary opinion.

Resolved further, That this Association is under great obligation to Senator Edwards for the most delightful day's entertainment which he so hospitably extended to us at his Pine Grove Stock Farm at Rockland, Ontario.

Thanking the City Authorities of Ottawa.

Resolved, That the thanks of this Association are hereby tendered to the authorities of the city of Ottawa for the use of the Council Chamber in the City Hall for the holding of our meetings.

Thanking the Committee of Arrangements.

Resolved, That the thanks of the Association are hereby tendered to the local Committee of Arrangements for the splendid preparations made by them for our entertainment and for the complete manner in which they have been carried out, rendering our sojourn in the Dominion a most pleasant and profitable one.

On the Death of Dr. Parker.

WHEREAS, We have learned of the death in South Africa of Dr. John M. Parker, a valued member of this Association, Therefore be it

Resolved, That we hereby express our regret at the loss sustained by the profession and the Association in his death.

Condemning Advertising Circulars.

WHEREAS, Some of our members have recently issued circular letters calling attention in great detail to their facilities for rendering veterinary service,

WHEREAS, These circular letters were widely distributed to owners of animals, including the clients of other veterinarians; Therefore be it

Resolved, That this Association holds that such circular let-

ters are in violation of the spirit of our code of ethics and reflect upon the dignity of this Association.

REPORT OF THE SECRETARY.

Secretary Repp read a very comprehensive report dealing with the affairs of the Association as viewed through his special opportunities for practical observation. It showed that the work of the Secretary is becoming a very large undertaking, and that it is rendered very much more laborious by the failure of members to honor communications sent to them. Especially is this true in his efforts to prepare the literary programme. From the general invitation for volunteer papers, the most meagre results were obtained, and he was compelled to make personal appeals to individuals, which greatly increases the work and anxiety of his office. Upon the whole, however, the affairs of the Association are in excellent condition.

REPORTS OF RESIDENT SECRETARIES.

This section of the programme consisted chiefly in the calling of the roll of the various States and Territories and the failure of the Secretaries to respond either in person or by letter. To this rule there were some notable exceptions. The interesting and instructive nature of some of the reports submitted make it seem impossible that there were so many Secretaries who could find nothing of interest to report from their sections, leaving one to infer that it was more a matter of indifference and neglect which governed their silence. One of the best of these reports came from Secretary Marshall, of Pennsylvania, and we publish it in full:

"Veterinary affairs in Pennsylvania are in a most satisfactory condition. The profession is made up of hard workers, not only professionally, but wherever or in whatever seems best for our advancement or mutual benefit. Members of one great family could have interests no more in common. This fact is illustrated by the interest taken in our different associations. We have four well-organized associations, the largest of which is the Pennsylvania State Veterinary Medical Association. This society holds two meetings each year. The annual meeting is held in Philadelphia, beginning the first Tuesday after the first Monday in March of each year, and continues two days. The semi-annual meeting convenes on the third Tuesday of September, at such a place as shall have been agreed upon at the annual meeting. This year it is to be held in Pittsburg, Septem-

ber 15th. There is an effort being made at present to have the semi-annual meeting held each year in Pittsburg. Dr. E. M. Ranck is President and C. J. Marshall, Secretary.

"In the past year the Allegheny County Veterinary Medical Association has enlarged its scope and changed its name to the Western Pennsylvania Veterinary Medical Association. It was organized with about twenty members. Dr. Charles W. Boyd, Allegheny, Pa., was chosen President, and Dr. Fred. Weitzel, 100 Parkway, Allegheny, as Secretary. The meetings are held the first Wednesday evening of each month at the Hotel Victoria, Sixth St., Pittsburg, Pa.

"The Schuylkill Valley Veterinary Medical Association is an earnest, hard-working organization, made up of about twenty members. The annual meeting is held at Pottsville on the third Wednesday of June, and the semi-annual meeting at Reading, the third Wednesday in December of each year. Dr. F. H. McCarthy, of Pottsville, is President and Dr. W. G. Huyett, of Wernersville, is Secretary.

"The Keystone Veterinary Medical Association meets in Philadelphia, at Broad and Filbert Streets, the second Tuesday of each month. Dr. W. S. Kooker, of 1116 Wallace Street, Philadelphia, is the President and the Secretary is C. J. Marshall. This association appointed a committee of three last winter to confer with the proper officers of the City of Philadelphia for the purpose of inaugurating a more effective city meat and milk inspection. This duty was attended to, with the result that Dr. Leonard Pearson was appointed as a member of the Board of Health. With Dr. Edward Martin and Dr. A. C. Abbott at the head of the Health Department, we have reason to believe that something definite may be done in the way of meat and milk inspection that will be a credit to the city of Philadelphia.

"These different associations are working for one common cause and that is the elevation of the profession. They are valuable tributaries to the success of our National Association. We cannot commend too highly the work of the local associations, in some one of which have originated nearly all the laws that have any beneficial effect on the profession. And we feel that we have a right to rejoice in the protection that is afforded by the laws that have been enacted through our efforts.

"It was stated in the Secretary's report last year, that an effort was to be made to get a law passed requiring a reregistration of all the veterinarians in the State. This appeared to be the only

way that we could free our lists of a large number who registered under the old law and had ceased to have any identity with our profession. This matter was dropped for the reason that an attempt had recently been made to reopen the registration list so a few might register who had failed to attend to this duty at the proper time. If this had been accomplished there would have been an undesirable class of men allowed to register from our own State, and quacks and impostors from other States as well as our own would have been admitted to the profession in Pennsylvania. With an uncertain legislature and this recent attempt at legislation fresh in our minds, it was deemed advisable to let the registration list remain as it is for a time.

"A few laws were passed by the last Legislature through the efforts of the State Live Stock Sanitary Board. One was an act to encourage the repression of tuberculosis of cattle, and to provide for the disposition of the carcasses of meat-producing animals that are infected with tuberculosis to a degree that renders their flesh unfit for use as food. This measure makes it possible to use the meat of an animal that has a slight case of tuberculosis if it has been properly inspected. The previous method of consigning a carcass to the tank, when the only reason for doing so was the fact that the animal had failed to pass the tuberculin test, was long recognized as wasteful and extravagant. It was not the fault of the State Live Stock Sanitary Board that this law was not enacted before. People objected to using the meat from an animal that was known to be affected with tuberculosis ever so slightly. At the same time they would use the meat from a non-inspected animal, that was a great deal more unwholesome, because their attention had not been called to the fact that the animal was diseased.

"Another act was also passed which gives the State Live Stock Sanitary Board the power to enforce a proper quarantine of dogs during an outbreak of rabies and prescribes what measures shall be adopted to prevent its spread.

"Our profession was disappointed in the action taken by the Legislature in reference to a racing bill which was presented at the last session. This bill provided for a state racing commission which was to be appointed by the governor and made up of men interested in the improvement of horses. This commission was to be empowered to license race courses and race meetings to the end that horse racing might be conducted honestly and free from gambling.

"An appropriation of \$6,000,000 was made at the last session

of the Legislature for the improvement of public roads. This is to be used in all parts of the State and apportioned out in such a manner that it will last for six years. In many portions of Pennsylvania, as in all other States, the country roads are nearly impassable during certain seasons of the year. We consider that the money thus appropriated for improving the condition of our roads will go farther in developing the agricultural portions of the commonwealth than could be procured in any other manner by the same amount of money expended. The veterinary profession was united in its support of this appropriation. Telephones are being introduced in nearly all the rural sections of the State. This convenience with the possibility of having good country roads, opens up a large field for veterinarians. Formerly the stock-raiser who lived in the back districts was so far isolated from veterinary medical attention, that a sick or injured animal could not receive proper attention till it was too late. With the conveniences of telephones and good country roads it will be safer to keep and raise valuable stock in these formerly isolated country districts because medical attention can be more easily obtained.

"The Veterinary Department of the University of Pennsylvania is still in temporary quarters. The teaching staff remains unchanged and one of the best classes of young men was graduated at the last commencement that ever left this department. It is hoped that the necessary appropriation will soon be forthcoming to make it possible to go on with the work of constructing the necessary buildings according to the magnificent plans that are at present completed.

"Diseases of a contagious nature have caused less than the customary damage or alarm in the State during the last year. A few cases of glanders, rabies, anthrax, blackleg, hæmorrhagic septicæmia and forage poisoning have appeared in different parts of the State, but have been promptly suppressed through the watchful care and prompt action of the State Live Stock Sanitary Board. Equine influenza and canine distemper have been about as prevalent as usual. An effective preventive inoculation for these two disease would be hailed with delight.

"It has been suggested that it might be wise for the American Kennel Club or some other organization, interested in the diseases of dogs, to obtain the services of a competent bacteriologist to make a study of canine distemper and, if possible, to discover a preventive inoculation or a serum treatment that would prove effectual in combating this disease. Anthrax vac-

cine, blackleg vaccine and tetanus antitoxine are used extensively and we believe effectually throughout the State in preventing these diseases. It seems possible that some equally efficacious treatment or prevention might be discovered to combat equine influenza and canine distemper, which are so common all over our country.

"Aside from the diseases of a contagious nature the veterinarian's services are becoming more appreciated in the treatment of animals suffering with diseases of a sporadic nature, lameness, accidents and in making useful operations, inspections, etc. It is plainly observed that the field of a veterinarian's usefulness is constantly increasing.

"The State Live Stock Sanitary Board has maintained its high standard of usefulness during the past year. Owing to the change of administration, some changes were made in this Board. The merit of our State Veterinarian was justly acknowledged by reappointing him to his old position. This recognition met with the universal approval of our profession as well as those interested in breeding or handling domestic animals. This Board has conducted a successful experiment during the last year, in immunizing cattle against tuberculosis. The result of this experiment has been published by Drs. Pearson and Gililand and is familiar to most of you. The practical application of it remains to be developed. Our last Legislature appropriated twenty-five thousand dollars for this purpose. The work is being rapidly organized and a number of experiments are already started, which, when completed, will show the practicability of vaccinating cattle against tuberculosis. If they are able to bring this method of vaccination into general use, as we believe they will, it will prove one of the most important discoveries in connection with veterinary medicine that has ever occurred. We can appreciate to a certain extent the value of this work when we realize that the annual loss from tuberculosis of cattle in this State alone is over a million dollars.

"Tuberculin has been used as a diagnostic agent in Pennsylvania more extensively and with better results perhaps than in any other State in the Union. The verdict in reference to the value of tuberculin by the profession as well as the most progressive breeders and dairymen in this State is unanimously in favor of it. By the judicious use of it an infected herd can be freed from tuberculosis and kept practically so. We condemn its use in the hands of laymen and realize more and more that it should be restricted to the use of scientific men and they

should be absolutely honest and painstaking. It is not sufficient to test a herd and remove the ones that react, disinfect the stables and expect that tuberculosis is permanently exterminated. It is necessary, in addition to these precautions, that a re-test shall be made as long as any reactions are obtained. Not more than six months to a year should pass before this is done. After an infected herd has been freed from tuberculosis according to the most approved methods known at the present time, careful observation is required that it may be kept in this condition. If a vaccine can be produced that will prevent an animal from becoming infected with this disease the secret of managing a dairy herd with profit and pleasure will be solved."

Secretary Dunphy, of Michigan, reviewed the veterinary situation in his State, and closed by an invitation to the Association to again visit Detroit for an annual meeting.

CHANGES IN THE BY-LAWS.

The following amendments to the by-laws were adopted :

To amend Article I, Chapter X, of the By-Laws by substituting the words "The third Tuesday and following days of August," for the words "The first Tuesday and following days of September," in the second and the third line thereof.

To amend Article I, Chapter VI, of the By-Laws by adding the words "during his agricultural course," immediately after the word "equivalent" in the eighteenth line thereof ; and by striking out the sentence "If of a medical school a similar curriculum shall prevail" in the twenty-third and the twenty-fourth line thereof.

To amend Article II, Chapter V, of the By-Laws to read as follows: The Committee on Intelligence and Education shall collect and distribute to the members of the Association, upon request, literature calculated to develop public interest in veterinary sanitary work and veterinary legislation, municipal, state and national, in so far as seems proper to the committee and the funds appropriated will allow ; and report recent veterinary facts and intelligence.

REPORT OF THE TREASURER.

Treasurer Lowe gave in detail the financial operations of the Association for the past year, not omitting the crossing of a *t* nor the dotting of an *i*. This can be of no interest to our readers beyond the gross statement of the finances of the Association, which is hereby appended :

Balance on hand at last report	\$ 576.83
Cash received since that date	1,667.37
Total	2,244.20
Disbursements	1,914.68
Leaving a balance on hand.	329.52

The report was referred to the Finance Committee, which approved it.

The Association at this hour (1 o'clock) adjourned for lunch, reconvening at 3 P. M.

LETTERS OF THANKS AND REGRETS.

A letter was read by the Secretary from Mrs. R. S. Huidekoper acknowledging in a grateful manner the receipt of the engrossed resolutions upon the death of her husband. Also letters of regret at their inability to attend this meeting from Drs. Leonard Pearson, Philadelphia; James Desmonde, Australia; John W. Grove, Canada; W. H. Wray, England; W. H. Dalrymple, Louisiana; Theobald Smith, Massachusetts; W. H. Welch, Maryland; Eduardo Nocard, France; J. H. Raymond, Brooklyn, N. Y.; Herman M. Biggs, New York City; A. Liautard, Paris, France; Duncan McEachran, Montreal; E. Peronito, Turin, Italy; J. McFadyean, England; Ray J. Stancliffe, U. S. Army, and R. H. Harrison, Milwaukee, Wis.

ELECTION OF OFFICERS.

Dr. J. G. Rutherford placed in nomination for the office of President Dr. M. E. Knowles, of Montana, which was seconded by Drs. J. F. Winchester and F. Torrance.

Dr. Tait Butler nominated Dr. Roscoe R. Bell, of New York; seconded by Drs. George H. Berns, A. H. Baker, and Wm. Herbert Lowe.

To elect five Vice-Presidents the following members were nominated: Drs. J. G. Rutherford, C. J. Marshall, M. H. Reynolds, M. E. Knowles, E. L. Quitman, J. Elmer Ryder, W. A. Heck, W. H. Dalrymple, and Wm. Herbert Lowe.

For Secretary, Dr. John J. Repp was the only nominee, and for Treasurer Dr. Wm. Herbert Lowe was without an opponent.

The result of the balloting showed the following to have been elected for the year 1903-04:

President—Roscoe R. Bell, of New York.

Vice-Presidents—M. E. Knowles, of Montana; J. G. Rutherford, of Canada; W. H. Dalrymple, of Louisiana; C. J. Marshall, of Pennsylvania; J. Elmer Ryder, of New York.

Secretary—John J. Repp, of Pennsylvania.

Treasurer—Win. Herbert Lowe, of New Jersey.

THE DAY AT PINE GROVE STOCK FARM.

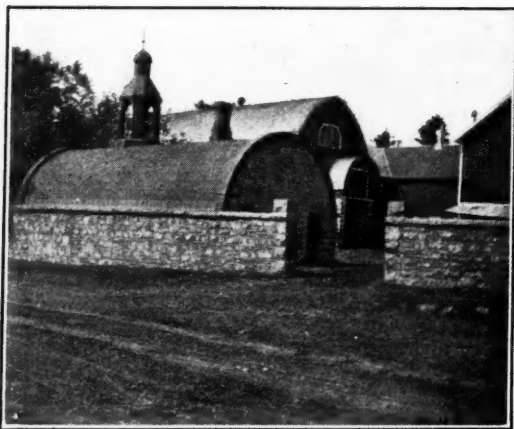
At 7.20 A. M., of the second day, Wednesday, Sept. 2, the steamer was boarded by the members, visitors and the ladies of their families, when a delightful sail of twenty miles down the Ottawa river was enjoyed, music being supplied by an orchestra from the Foot Guards, a novel adjunct to which were the Scottish bag-pipers in Highland costume, W. G. Grant and Piper Saunders, the former being especially notable by his splendid physique and manly carriage. Just how many were aboard we do not know, but certainly not less than three hundred. On arriving at the wharf at Rockland, which is located on the Pine Grove Stock Farm, carriages of all kinds were in waiting, supplied by Senator Edwards, proprietor of the farm. There were four-in-hand breaks, horsed with splendid hackneys; surreys, traps, runabouts, and various other equipages, and the ladies were assisted into them and driven over the grounds of the splendid establishment. It was about an eighth



THE HIGHLANDERS AND DR. RUTHERFORD.

of a mile from the wharf to the barns on the farm, and for the convenience of the guests there had been built a board walk across the meadows, over which they marched, preceded by the bag-pipers. To the barns the column moved, where the distinguished host greeted his guests in a most cordial manner, personally conducting them through the great breeding establishments, and describing the lineage of his splendid herds of Durhams and other breeds. The well-fenced pasture fields were full of brood-mares, foals, yearlings, and older horses of various strains. The veterinarians were much interested in the arrangement of the barns,

the excellent systems of ventilation, drainage, etc., and in the isolation arrangements necessary to carry out the Bang System



VIEW OF THE BARN-YARD AT PINE GROVE.

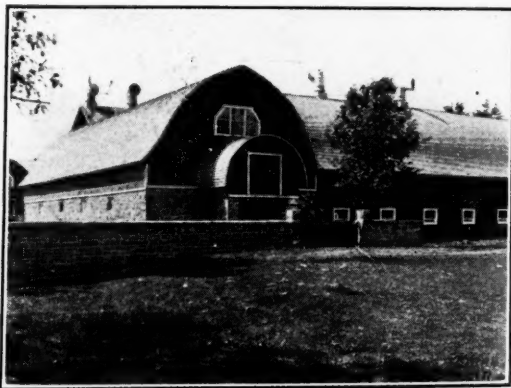
Note the barn-yard fence and roofs of some of the smaller buildings.

of treating tuberculosis. In the large sales barn, a building of about 100x200 feet, four tables, extending its entire length, were arranged for the banquet to the guests.

From the ceiling hung large British and American flags, side by side, while smaller ones of both nations were tastefully grouped about the four walls. Not

an item appeared to be lacking in the arrangement of this gigantic feast, to which the guests sat down at about half past twelve o'clock. Senator Edwards occupied the chairman's seat, on either side of whom were the Minister of Agriculture, the Hon. Sidney Fisher, Senator Owens, Dr. Salmon, Prof. Law, Senator Legris, President Stewart, President-elect Bell, Senator Baker, Senator King, Jabel Robinson, M. P., and others. When the repast was over, President Stewart

called the meeting to order, and indulged in some timely remarks upon the object lesson to which the guests had been treated during their inspection of the farm, as well as their experience of Canadian hospitality as exemplified in the public-spirited action



THE BARN WHERE THE SENATOR DANCED THE HIGHLAND FLING.

This stable has an interesting and practical ventilation. Funnel shaped stacks with vanes revolve to face the wind, and are for inlets. The "T" stacks, one end funnel shaped, are for outlets, the wind producing upward suction by blowing through the horizontal portion of the "T." The inlet air is distributed from glare boxes in the basement through auger holes.

of H to a ca St tic pa se ou co

bre
rie
di
ro
sic
ad
tu
lig
ly
ci
it
wh
ch

of Senator Edwards in giving them the opportunity to do so. He then announced that the section of the programme arranged to take place at Pine Grove would be started by the reading of a paper by the host, entitled "The Bang System for the Eradication of Tuberculosis in Cattle as Practiced upon Pine Grove Stock Farm, Ontario, Canada." As a contribution to the practical operation of the breeding-out process Senator Edwards' paper was a decided success, interspersed with hard common sense in dealing with the white plague. He showed throughout the greatest familiarity with the most recent scientific discoveries concerning this disease, obtained through large expe-



A PORTION OF THE TUBERCULOUS HERD AT PINE GROVE STOCK FARM.

The tuberculous cows are rigidly separated from the nontuberculous herd, and are kept in breeding according to the Bang system.

rience and extensive reading of reliable literature. The audience was in thorough sympathy with him, applauding him roundly and congratulating him heartily. At the regular session of the Association, on the following day, a resolution to adopt his paper as a valuable contribution to veterinary literature was carried, with instructions to the Committee on Intelligence and Education to effect its wide distribution, particularly to secure its publication in the *Breeder's Gazette*, the Association believing that, being the production of a scientific breeder, it would have great weight among his fellow-breeders. Those who participated in the discussion of Senator Edwards' paper, chiefly confined to inquiries as to details and words of apprecia-

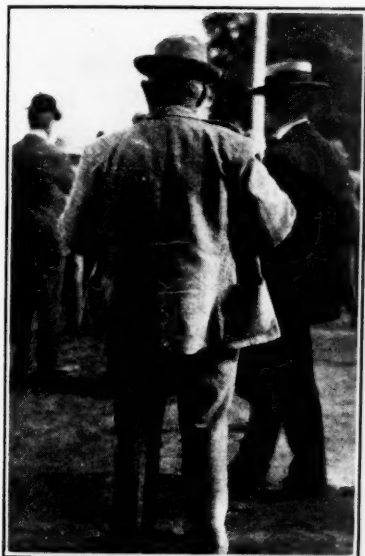
tion, were Drs. Reynolds, Moore, Law, Huff, Butler, Rutherford, Senator Owens, and others.

Then came the sensation of the meeting, the paper by Dr. D. E. Salmon, Chief of the Federal Bureau of Animal Industry, entitled "Bovine and Human Tuberculosis," in which he detailed the experiments conducted by his staff to disprove the remarkable contention of Prof. Koch, before the London Congress on Tuberculosis in 1901. Comment is here unnecessary, since we publish in another department the paper in full. The effect of Dr. Salmon's paper was electrical; every one seemed to realize that they had been particularly fortunate in being present to listen to the reading of a paper that effectually settled an important question of world-wide interest; that a new chapter in the history of medicine had been completed; that an international bomb had been exploded, and that they had been present when the lucifer was applied; that the meeting in the barn was to go down in history as a memorable one, and that they had been a part of that great gathering. Cheer after cheer leaped from the throats of the guests, and the essayist was applauded to the echo, while every speaker who followed gave him unstinted praise, not only for his unanswerable experiments, but for the arguments which he put forth in reply to Koch's deductions. There was no discussion—just praise. Minister of Agriculture Fisher paid a glowing tribute to Dr. Salmon and the Bureau, and spoke of the great benefits that will accrue to humanity by virtue of a full knowledge of the facts described in the paper. Dr. Rutherford felt under great obligations to Dr. Salmon, and was proud that this important paper was brought forth on Canadian soil. Dr. Montizambert, of the Department of Health, spoke in the same strain, paying high praise to the veterinary profession, alluding to it, not as a sister profession, but as a sister branch of medical science. Drs. Wheeler, Moore, Law, Higgins, Noack, and others also made remarks, while during the remainder of the programme every speaker made reference to the chief topic of the occasion.

"A Microscopic Study of a Case of Tuberculosis in a Cow with Reference to Distribution of Bacilli," was the subject of a paper by Dr. John J. Repp, illustrated by means of stereopticon views (shown in the evening). This paper is valuable as showing the extensive character of the lesions in an animal which gave very little evidence of disease upon physical examination, and emphasizes the danger of spreading the infection. It will be published in an early number of the REVIEW.

"Avain Tuberculosis" was an account of the investigations of Prof. V. A. Moore and Dr. A. R. Ward at Berkeley, Cal., the past summer, where the disease almost depopulated the poultry pens along the Pacific Coast. This was in the nature of a preliminary report, as Dr. Moore had just returned from his duties at the Golden Gate and has not had time to perfect his conclusions. It brought forth a lively discussion, however, participated in by many.

Following this the Chair was resumed by Senator Edwards,



"IN MEASURELESS CONTENT." (*Macbeth*.)
A compliment to the dinner at Pine Grove.

and a number of the guests spoke in a patriotic and fraternal manner, all agreeing that the two English-speaking nations should be bound together in closer ties, both scientifically and as a people. Those who spoke were Dr. Hoskins, Senators Owens, Baker, King, and Legris, Jabel Robinson, M. P., and Senator Edwards. The meeting closed with singing "God Save the King" and "America," while three cheers and a tiger were given for King Edward, President Roosevelt and the host. After photographing the group in front of the banquetting building, the guests slowly wended their way toward the wharf, many in carriages, others inspecting the large sawmills and barns, finally boarding the steamer, where music, dancing and other diversions made a pleasant trip back to the city.

THE PROPOSED MUTUAL AID ASSOCIATION.

On Wednesday evening the members in large numbers assembled in the Council Chamber of the City Hall to hear a proposition by Dr. Wm. Dougherty to establish a mutual aid association, carrying a sick benefit and a death benefit fund. The doctor had prepared a paper setting forth his views, and had had printed and distributed a large number of copies of a pamphlet giving a proposed Constitution and By-Laws for the organization. The proposition was received rather coldly, the speakers being rather afraid that it would not prove a good busi-

ness venture. Many thought that it would be difficult to collect the assessments and the dues. The sick benefit clause did not appeal to them at all, while the death benefit clause was more attractive. A vote was taken as to whether the Association wished to go into a consideration of the proposition at all, and decided that it did not. A reconsideration of the vote resulted in instructions to the President to appoint a committee to gather facts as to such organizations to be communicated at the next meeting of the Association.

READING OF PAPERS.

Following the meeting to consider the above scheme, Dr. Pierre A. Fish, of New York, presented his paper on "The Effects of Certain Drugs upon Blood-Pressure and Cardiac Inhibition in the Horse," illustrated by numerous lantern-slide views. The views were explained by the essayist as one followed another, and were very instructive and entertaining.

Dr. A. S. Wheeler, of Biltmore, N. C., presented a paper on "Experiences with the Stomach Worm in Sheep," which was full of practical ideas and conclusions as to the best methods of ridding the host of these almost fatal parasites.

Dr. Charles H. Higgins, of the Experimental Farm, Ottawa, Can., read a very comprehensive thesis on "Black Leg and Anthrax," which was particularly valuable as making the subject much clearer to the average practitioner than is usually accomplished in the text-books and technical literature. The methods of preparing blood and transmitting it to the laboratories for examination and diagnosis were made very plain. We shall endeavor to obtain a copy of the paper for publication, as it will prove very helpful to the busy practitioner in the field. Drs. Wheeler, Kelly and Moore discussed it.

Dr. Knowles read a paper on "Meat and Milk Inspection," dealing chiefly with the excellent law which he was so largely instrumental in having passed by the legislature of Montana, the law itself forming a large part of the paper. It brought forth quite a discussion, much of it being excited by the inability of the Montana authorities to secure competent veterinarians to fill the positions created by the law, even though larger salaries were guaranteed than for similar positions in other States. The discussion turned upon the salaries paid by the Bureau, with opinions *pro* and *con* as to their adequacy for the attainments of the inspectors and the work demanded of them. The laws of other States were described by some of the speakers, and the

merits of the bill under consideration were discussed. Those taking part were Drs. Kelly, Baker, Simpson, Lowe, Salmon, Butler, Hoskins, Law, and Leech.

At the opening of the afternoon session on Thursday the Hon. Sidney Fisher, Minister of Agriculture, delivered an address on "The Importance of Veterinary Science to Agriculture," and it was an excellent effort, every man present feeling proud that he was a member of a profession whose possibilities were so great toward the health and prosperity of the world.

Following Mr. Fisher's address Dr. J. G. Rutherford gave a talk on "The Uses of Mallein in Dealing with Glanders," especially based upon his experiences with the serum. His conclusions were such as are generally accepted by those with large experiences with it; his methods of dealing with reacting animals, however, being rather more effective than is the custom in the States. The subject was quite lengthily discussed by Drs. Berns, Kelly, Bell, Pierce, Lowe, Dougherty and Leech.

COMMITTEES FOR 1903-04.

President Bell has announced the appointment of the following committees:

Executive Committee.—Leonard Pearson, Chairman; D. E. Salmon, W. L. Williams, S. Stewart, W. Horace Hoskins, George W. Dunphy, A. H. Baker. *Ex-officio*—Roscoe R. Bell, M. E. Knowles, J. G. Rutherford, W. H. Dalrymple, C. J. Marshall, J. Elmer Ryder, John J. Repp, Wm. Herbert Lowe.

Finance.—Thos. E. Smith, Chairman; S. Brenton, Eugene Burget.

Publication.—M. H. Reynolds, Chairman; Robert W. Ellis, Richard P. Lyman, T. E. Robinson, L. H. Howard.

Intelligence and Education.—E. B. Ackerman, Chairman; F. Torrence, A. T. Peters, J. W. Connaway, E. M. Ranck.

Diseases.—Charles H. Higgins, Chairman; A. S. Wheeler, C. A. Cary, V. A. Moore, N. S. Mayo.

Army Legislation.—D. E. Salmon, Chairman; James Law, Benj. D. Pierce, Wm. Henry Kelly, E. H. Shepard.

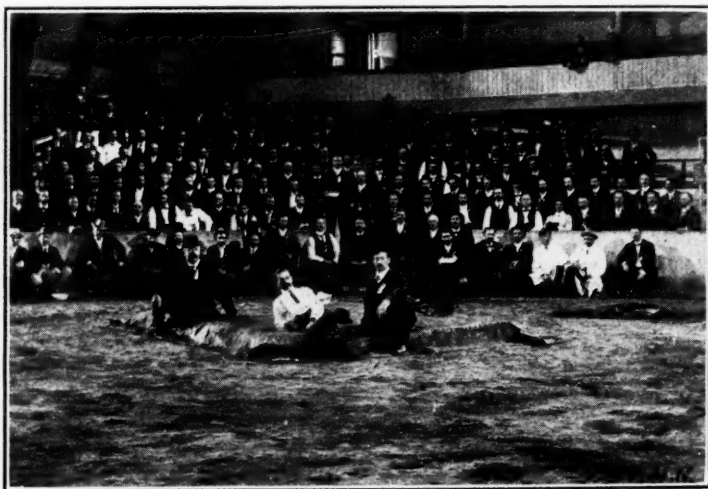
Resolutions.—M. E. Knowles, Chairman; W. A. Heck, J. G. Rutherford, James L. Robertson, Joseph Plaskett.

Pharmacopœia.—E. M. Ranck, Chairman; Roscoe R. Bell, John J. Repp, D. King Smith, L. A. Merillat, E. L. Quitman, H. D. Hanson.

Standard of Excellence and Soundness.—George H. Berns, Chairman; M. H. Reynolds, Tait Butler.

THE CLINIC.

Was the clinic a success? We think it was, and we believe that it has solved the problem of the character of clinics at future meetings. While most of the practitioners who have attended former clinics have conceded their great interest and helpfulness to the practical men who attend the meetings, we think few have felt that they were anything like what they should be. The trouble came with the failure of the subjects to materialize, or the surgeons to be on hand. If both were present, and the operation was of such a nature as to require casting, there would be but little opportunity for many of those in attendance to see the field of operation or the surgical pro-



AT THE CLINIC.—GOOD INTEREST AND ATTENDANCE.

cedure, and if it required much time there was impatience among the auditors, and much loss of time. It is not difficult to appreciate that an ideal surgical clinic should consist in the performance of important operations by the most celebrated surgeons of the country; but it seems almost impossible to have all the conditions present to make it successful. The method adopted at Ottawa appears to have been spontaneous for lack of the assigned surgeons to fulfill their engagements, and it proved extremely interesting and profitable to all who were present, not alone in the examinations and diagnoses, but from the discussions which were brought out impromptu by the conditions as they arose. The following demonstrations took place:

Brown gelding, lame off hind leg, said to be chronic hip-lameness. Dr. Bell was called to the ring, and pronounced the lameness occasioned by diffused bone spavin. Dr. A. H. Baker confirmed the diagnosis.

Bay gelding, lame near front leg. Examined by Dr. Newton and diagnosed as navicularthrititis. Cocained by Dr. Bell, which caused the horse to trot sound. Neurotomed by Dr. C. E. Cotton, he performing the low operation.

Black gelding, exostosis with five fistulous tracts leading to centre, on the inferior maxillary bone at the bifurcation of the rhami of the jaws. Cast and operated by trephining, by Dr. E. C. Beckett, of Boston.

Gray gelding, lame near hind leg. Examined by Dr. S. Brenton and diagnosed as due to ringbone. Confirmed by Dr. M. C. Baker.

Gray gelding, crib-biter. Dr. Charles J. Marshall was asked to operate, by the nervo-muscular method, but declined, as he had failed to secure any recoveries in the cases that he had done. It appeared to be the general impression among those who had resorted to it that the results were poor.

Bay mare, lame near hind leg for past four years. Diagnosed by Dr. Winchester as due both to ringbone and spavin. Examined by Dr. Berns, and diagnosed differently, he believing lameness due entirely to ringbone. Dr. Bell thought it was caused by fracture of os suffraginis, resulting in exostosis and arthritis, while Drs. Baker, Massey and McKillip had views for and against. She was cocained in the digital nerve, which had but slight effect, subsequently being injected in the peroneal nerve, which improved her gait considerably.

While these few cases serve to show the character of the clinic, they do not explain the running discussion and the many practical points brought out. For instance, the subject of splints, their causation and treatment, was well discussed, and many other subjects received similar treatment.

Finally Dr. Tennent, of London, Ont., was asked to give his experience with the oxygen treatment for milk fever, which he did in a very interesting manner, giving the technic of his method, and provoking many inquiries concerning the details.

Dr. Reynolds photographed the scene, and promised to send a copy to all who applied. On the preceding page we have reproduced the photo taken by Dr. Reynolds, and, while the faces are small, they are very clear and distinct, and can be recognized by those acquainted with the individuals.

NOTES OF THE MEETING OF THE A. V. M. A.

Ottawa was wide open for the A. V. M. A.

The city was our host, and we were surely its guests.

We wined, dined and worked; renewed friendships, made new ones, gained health and strength, saw new sights, and learned much.

One thing we learned was that Canada is a great country, with vast possibilities. Another thing is that her people know it, and are exerting themselves to have other people know it.

They regard the Americans as their real cousins, and like to see the two flags floating side by side. They are fond of remarking that both flags have identical colors, only slightly different in design, and that each stands for the same principles of civilization and the best interests of the human race.

Just a little closer than the average American and the average Canadian is the American veterinarian and the Canadian veterinarian; and much was said and done at Ottawa to draw the knot tighter. And it isn't a "slip-knot" either.

The climax in entertainment was reached at Ottawa; and, graceful and grateful as it was, the REVIEW sounds the alarm that the good of the Association demands a halt in this direction. Our Canadian friends are not blameable in this direction. When Dr. Rutherford invited the Association to Ottawa, he assured the members that he would give them a good time. He did better than he agreed. He dazzled them.

But the Americans are the ones to simplify the entertainment. To make it so modest and inexpensive that we can hold our meetings wherever they will do the most good, not where we have a large membership with long purses.

In the case of Ottawa, it was not alone the resident veterinarians entertaining the parent Association; it was the Canadians doing homage to the Americans. We understand that the city gave liberally to the local committee to insure a pleasant time to the guests from across the border.

The local committee must have had an inspiration when it arranged that day at Pine Grove. Senator Edwards was a prince of hosts, and the memory of the day spent with him will abide with his fortunate guests while life lasts.

Dr. Rutherford was an ideal entertainer, whether in the literary sense or in the perfection of arrangements. But then he had Dr. Higgins, Dr. Harris, Dr. Whyte, Dr. James, Dr. Hollingsworth and Dr. Boucher to back him, which they did in an enthusiastic manner.

Side trips going and coming were the rule. A party of Eastern veterinarians and their families went by way of Clayton, Thousand Islands, Kingston and the Rideau Lakes. The scenery was enchanting, the experiences novel, the traveling restful—everything conspiring to make the trip ideal. Aboard the *Rideau Queen* on Monday, Aug. 31, were Dr. George H. Berns, wife and daughter, Dr. Roscoe R. Bell, wife and two boys, Brooklyn; Dr. J. Elmer Ryder and wife, and Dr. James L. Robertson, of New York City; Dr. Wm. Herbert Lowe and wife, Paterson, N. J.; Dr. W. Horace Hoskins and wife, and Mr. and Mrs. Brooks, Philadelphia, Pa.; Dr. Thomas E. Smith, Jersey City, N. J.; and Dr. Eugene Burget, Mayor of Wadsworth, Ohio.

While the attendance was large, many of the populous Eastern States were poorly represented. Pennsylvania particularly has fallen back in her annual pilgrimage to the great international veterinary convention. But five of her large membership were on hand; yet the distance was comparatively short. New Jersey did much better, having six present, which is a fairly good percentage. New York had more than New Jersey and Pennsylvania combined; but, then, there were not half as many Empire veterinarians at the Canadian Capital as should have been, considering its large quota of members. That New York City should have had but four delegates at Ottawa at a time of the year when professional duties are least active, does not speak well for association interest among New York veterinarians. Massachusetts was well represented. There were Pierce from Springfield, Howard from Boston, Playdon from Reading, Dodge from Leominster, Winchester, Fuller and Zuber from Lawrence, Winslow from Rockland, Roberts from Northampton, Simpson from Somerville, and Perry from Worcester. North Carolina had $66\frac{2}{3}\%$ of her eligible men present. There are three in the State, and two of them (Butler and Wheeler) were on hand, and each took a lively interest in the programme. Manitoba had a large delegation, considering that the distance was 1300 miles.

The prediction that the list of new members would fill two pages of the REVIEW was more than realized, as will be noted by reference to the list elsewhere. The Association gained a small army of new members, jumped clear over the 500 mark, and well on toward 600.

"The Royal Shanty" was the destination of the trolley ride on Friday afternoon. It is a log-cabin, built upon the lines of

a lumberman's house, and some years ago some members of the Royal family dined there upon the lumberman's bill of fare. Since then it has borne the above name, and has become an object of much interest. A tent was spiked in the grove surrounding the "shanty" for the accommodation of the guests, and refreshments, both liquid and solid, were supplied without limit.

The "camera fiend" was everywhere in evidence. Mrs. G. Ed. Leech, of Minnesota, snapped about a hundred films.

There was a notable change in the sentiment of the Canadian press as the character of the meeting became manifest. Before the assembling of the convention, there was a disposition to treat the visitors as an invasion of "horse-doctors"; after the first session we were a "great organization of veterinarians guarding the health and wealth of the continent." There can be no doubt but that the fortieth annual meeting of the A. V. M. A. has done a great service to the profession in Canada.

Dr. V. A. Moore, of the New York State Veterinary College, who spent his summer vacation in California, investigating contagious diseases of poultry, was looking in fine health, having gained considerable flesh.

Dr. Newton, who has occupied the position of Sheriff of Toledo, Ohio, for four years, did not fail to take in every part of the Ottawa programme.

Every one remarked upon the improved appearance of Dr. Salmon. He has gained fifteen pounds of healthy-looking avoirdupois, his step is elastic, his eye bright, his complexion clear, and his Vandyke beard quite becoming. His sojourn at the Hub evidently agreed with him.

Dr. Richard P. Lyman, who disposed of his practice in Hartford, Conn., to enter into partnership with his father in Boston, has returned to Hartford and purchased an interest in his former practice.

Many of the visitors paid a visit to the House of Parliament, which was in almost continuous session on the bill to appropriate \$100,000,000 to build a railroad through the heart of Northern Canada.

A visitor to Canada is struck with the large number of very old men who are vigorous and healthy. Some one said that a Senator who occupies his seat daily was a hundred years old.

We were shown a letter to Dr. Winchester from a gentleman in South Africa who was with Dr. John M. Parker at the time of his death, and the cause assigned by him for his untimely end was a blood clot on the brain.

Many were the kindly expressions for the REVIEW. Some said that the annual meetings of the Association are very enjoyable and instructive; but they are not to be compared with the monthly visits of the "dear old REVIEW." We cannot express in adequate language our feelings at these assurances of appreciation of our humble efforts. But, then, the REVIEW is the child of the profession; it is made by the profession; those who figure as editors merely put together the productions of the profession. If this is done to their satisfaction, we are pleased.

The colleges were fairly well represented at Ottawa. The one having the greatest number of delegates was the New York State, which sent Profs. Law, Moore, Fish, and Hopkins; the New York-American, Profs. Robertson, Ryder, and Bell; the Chicago, Profs. Baker, Hughes, and Quitman; the Kansas City, Profs. Stewart and Brown; the Ontario, Profs. Andrew Smith, D. King Smith, and C. H. Sweetapple; the University of Pennsylvania, Drs. W. Horace Hoskins and C. J. Marshall; the Laval University, Prof. Daubigny.

The U. S. Army was represented by Dr. Daniel Le May, who was accompanied by his charming wife.

Drs. Winchester, Hoskins, Lowe, Reynolds, Newton, Kelly, Plaskett, Viles and T. E. Robinson were among the Nobles of the Mystic Shrine in evidence at the Ottawa meeting A. V. M. A.

The REVIEW has received from Dr. M. H. Reynolds since his return from Ottawa a copy of the report of the Resident State Secretary for Minnesota, with a request that it be published. As this report was not read before the Association either in detail or by title, and as it deals largely in personalities, attacking Dr. Reynolds, the REVIEW declines to give it space. It positively refuses to enter into local dissensions.

NEW YORK STATE VETERINARY MEDICAL SOCIETY.

The thirteenth annual meeting convened in the amphitheatre of the New York State Veterinary College, Ithaca, N. Y., at 10 A. M., Tuesday, Sept. 15, with President James Law in the chair, Secretary Wm. Henry Kelly recording. After calling the meeting to order, President Law introduced the Hon. Andrew D. White, of Cornell University, former United States Ambassador to Germany, who welcomed the Society to Cornell in an impressive address. He gave an account of how the founder of the great university had many years ago despatched him to England to obtain a veterinarian to fill the

chair of veterinary science in the agricultural department, his instructions being to secure a young man who possessed the endorsement of the Elder Gamgee. The result of that trip was the enlistment of Dr. Law, with what success every veterinarian in this country knows, and he felt that we all had reason to bless the day that brought him to our shores. He congratulated the Society upon its marked progress, as denoted by the increased attendance and the character of the programme, and he hoped the present meeting might be the most profitable one in our history.

Then President Law delivered the annual address, as follows:

THE PRESIDENTIAL ADDRESS.

"One year ago I hastily passed in review some indications of the revolution in medicine which has been witnessed in the past fifty years. On the old basis, formed by the accretions of centuries, we have speedily built what we proudly view as a rational and scientific superstructure, which bids fair to last for many years, as itself a solid support of the medical science of the future. And yet who can tell what even the near future may have in store for us? Years ago we had already accepted what had seemed impossible, and by means of the Roëntgen rays had lighted up the solid tissues of the body so as to reveal the presence of inorganic formations and objects, and the fractures, neoplasms and deviations of bones. Science had also revealed to us new elements, chief among which was radium, which possessed the power of constant emission of rays of light with next to no appreciable loss of its own substance. Radium had even been proved to have a powerful influence on metabolism and trophic action, contesting with X-rays the claim of controlling and arresting the growth of malignant tumors. The year just past has added its endorsement to this claim of radium as a controller of nutrition, not of morbid structures alone, but also of the healthy, and to-day this new glowing element, this minister of light and beauty, has proved itself to be a material altogether too potent and dangerous to be thoughtlessly or recklessly handled. Whether its present cost of \$70,000 per ounce can be reduced to a less prohibitory figure, whether its great and acknowledged potencies can be availed of for therapeutic uses, and whether its no less patent dangers can be repressed and controlled so as to render its use safe and certain, must still be looked on as matters of speculation.

"But, whatever may be its direct availability in medicine,

radium promises to contribute to the evolution of new truths and doctrines which will give a novel aspect to the whole field of chemistry, physics, and the dependent sciences. An agent which can radiate luminous emanations for an indefinite length of time with scarcely an appreciable decrease of bulk or weight seems to demonstrate that the ultimate particles of which it is composed are incomparably smaller than the atoms which have been hitherto assumed to be the smallest ultimate, and indeed, the final and indivisible constituent of the chemical element. It seems as if we must hereafter abandon the as yet unseen, hypothetical *atoms* in favor of myriads of *ions*, inconceivably more minute, and in constant motion, oscillating and striking against each other, and the *ions* of surrounding elements. In this we have the expression of the latent energy and force which may become obvious to our senses in the forms of heat, light, electricity, chemical affinity, attraction, gravitation, etc.

"This may seem too speculative for such an occasion, and we may as yet fail to see its practical value in the exercise of our profession, so that it may be held that we had better confine ourselves strictly to truths that have been already demonstrated beyond question, which are in common acceptance, and of which we already see the application to therapeutics and sanitation. But with the experience of the wonderful 19th century before us, with the discoveries which, beginning in other lines, have culminated in a flood of light thrown on medicine and surgery, we cannot, as scientific men, afford to shut our eyes to the movement which promises to give us a new chemistry and a new physics. We must, as far as possible, keep in touch with every movement which tends to clearer and more definite views of the physics of chemistry, physiology, and medicine. When Lord Kelvin promulgated the theory that all forms of energy or force are but variations in the vibrations of the infinitesimal ultimate components of matter, who could have predicted that electric vibrations would be transmitted from continent to continent with the air or ether as a medium, and that they would be condensed on arrival into words and sentences? And who would have supposed that a scientist should calmly propose to explode a distant powder magazine, by means of such vibrations and without any intermediate metallic connection? And yet this is gravely proposed in our day. What would be the influence on the future peace of the world if every magazine, fort, battleship and ammunition wagon, could be shattered by the Hertzian waves, transmitted

to their explosive contents, through the atmospheric medium alone, and from a safe distance? The most startling flights of the imagination, if founded on a sound basis of science, are far more likely to be fulfilled in fact, than are many of the old time honored doctrines from which the foundations are being washed away by the new science.

"Certain it is that we are only beginning to learn the nature, scope and possibilities of such common things as heat, light and electricity, and from what we already know of the varied operations of these on the living animal organism, we need not be surprised if the most unexpected developments should come to extend and perfect our prophylactic and medicinal measures. The marvelous toxic and medicinal potency of many agents, elaborated in silence in the vast laboratory of nature, impress one with a sense of awe as well as wonder. That a different arrangement of the common ailments that form our food and breath, can beget the deadly atropin, aconitine, strychnine or prussic acid of the higher vegetables:—the toxins, enzymes and alixines of the microbial forms:—and the leucomains and venoms of the animal cells gives us some sense of the unthought of possibilities which remain for us in the field of organic chemistry.

We have learned to avail of many of these potent agents in our daily practice. The crude drug given by the stomach, and subject to many possible changes before it can be absorbed, has given place to the alkaloid, used hypodermically and little likely to undergo chemical change before it reaches the organ on which it exercises its physiological action. The toxin or the venom in safe doses, subcutem or intravenam, is employed to stimulate the defending leucocytes of the body to produce anti-toxins and other defensive products, and to impart to the system a more or less permanent measure of immunity from the poison or the microbe which produces it.

"Following the same line of thought and practice, we can appreciate the value, and avail of the benefit of certain drugs though these may show no marked action on any of the bodily functions:—they may corroborate the functions and the general health through their affecting the metabolism, the process of tissue nutrition, or the cell-activity whether in elaboration, disintegration or excretion. The value of echinacea, to be brought before this meeting by Dr. Fish, is very suggestive in this connection. The increasing use of antithermic agents, and nerve and heart sedatives and stimulants, further mark the steps in

advance and are an earnest of the future extension of the field in this direction.

"One of the most significant features of veterinary medicine to-day is the constant reaching out toward therapeutics and immunization by the use of serums of insusceptible animals, or such as contain the toxins of the dreaded disease. In this connection the contagious diseases are divided naturally into different groups:

"(1.) Those that follow an acute course and, in case of recovery, rarely or never recur in the same individual. These hold out the best hope of immunization or of antitoxin treatment. To this class belong anthrax, blackquarter, lung plague, swine erysipelas and chicken cholera.

"(2.) Those that follow an acute course, succeeded by a transient immunity, that becomes worn out in a few weeks or months, so that a new attack may occur. Of this class the foot-and-mouth disease is a striking example. Hence we can have much less confidence in the treatment of this disease, whether by immunizing serums, antitoxins or injected chemical disinfectants. It ill becomes any one, perhaps, in these days to throw cold water on enthusiastic research in any direction, as at any time an unexpected light may be thrown on a dark and unpromising subject, yet, in view of the visible conditions, it appears as if much valuable time, thought and labor had been recently expended in this very unpromising direction. A transient immunity from a nonfatal disease, and by a treatment which has to be repeated at very frequent intervals on all kinds of ruminating animals, in a district or country, is anything but a profitable investment.

"(3.) A third class of contagious diseases includes such as are not naturally self-limiting or are only so to a limited extent, and in which, therefore, an acquired immunity promises to be in many cases very partial and unsatisfactory. To this class belong tuberculosis, glanders and dourine. The naturally self-limiting diseases not only issue in an early recovery in favorable cases, but the recovered individuals show a strong indisposition to a second attack of that affection. But a tuberculous person or cow may remain tuberculous through a long lifetime and show no disposition to early death nor recovery and immunization. The microbe is constantly, though slowly, propagating itself in the system, the toxins are continuously poured into the lymph and blood channels, and the leucocytes are subjected to a constant stimulation to produce the immunizing and protect-

ing materials, but fail to produce them in amount or quality sufficient to destroy the microorganism. The same is largely true of glanders, which in its chronic form persists year after year in the same animal without an issue in death or recovery, but with a great tendency toward the infection of equine or human beings that may come in contact with it or with the places or objects that may receive or lodge the infection. Dourine frequently follows a similar course. Though sometimes early fatal, yet cases become chronic and apparently recover, but too often only to disseminate the disease anew when the animals are again put in use. For all such affections there are serious attempts at immunization. For a large number of very susceptible individuals there is no prospect at all of any considerable measure of resistance being acquired, and the diseased animals are meanwhile preserved as sources of infection for other susceptible subjects. For a number more, a partial immunization may be secured, but not sufficiently potent to eliminate the seeds of the disease from the system, and though the animals survive and may even be utilized, they prove the source of the extension of the disease to other animals.

"In the case of the human being where the individual life counts for much, and for very high-class animals the progeny of which it is all important to secure, the method may be resorted to under the most rigid and lasting precautions against the diffusion of infection. Where a State does nothing, or practically nothing effective, for the extinction of an infection, the owner of valuable stock may be justified in adopting such imperfect measures for personal benefit; but unless we can reach something incomparably better than has yet been achieved, this resort is not fit to be named along with a radical method which looks with a well-founded confidence toward the complete and final extinction of the infection in the land.

"As a measure for general application, the immunizing of 40,000,000 to 50,000,000 cattle and 30,000,000 or 40,000,000 swine, to say nothing of other domestic animals, is practically prohibitory in its expense, and all the more so that it is not, and does not pretend to be, a measure of absolute extinction. It must be continued year by year, and generation by generation to secure its good results.

"It would be wrong to discourage investigation and research. None can tell how soon these may furnish us with measures that will be entirely unobjectionable and thoroughly effective. But at the present stage of progress one may well call

attention to the contrast, as regards amenability to immunization and serum therapy, of the first and last classes of infectious diseases that have been named. There remains, however, as applicable to all these affections alike, the ideal method which must as a rule be the work of an intelligent legislation and administration—namely, the absolute extinction of every germ of the infection in the land, and the exclusion of all such germs as threaten the nation from outside. It is at present popular to deal with all such diseases by serum therapy or immunization. This appeals strongly to the public imagination. It appeals with no small force even to the physician sanitarian whose point of view is dominated by humanitarian rather than economic considerations; the same may be said of the bacteriologist whose immediate interest in his work tends to blind him somewhat to the economic problem. The veterinary sanitarian, however, must give the question of economy the primary place which is its due by right, and from this point of view every sanitary expedient must be held subservient to the final and complete extinction of the contagion. For the plagues of man this consideration has its limitations, but for those of the domestic animals it must dominate every other. We may well estimate the sanitary civilization of a country or state by its way of dealing with infection, whether by restriction or absolute extinction. Two considerations are, and should be dominant: (1) Is the plague due to a microörganism? and (2) Is it possible to eradicate that microbe, not from the sick animal only, but also from the whole country? These two questions answered in the affirmative, there should be only one course open to the government and the government veterinarian. With a deadly infection, anything that is allowed to stand in the way of extinction, where that is possible, is evidence of a lack of economic and sanitary forethought. Half measures indicate less than half apprehension of duty and an entire lack of statesmanship.

"In a thoroughly educated community there is no excuse for the continued existence of a purely contagious disease. We may not live to see it, but with the continued advance in intelligence, the time will assuredly come when all our purely contagious diseases will be matters of history only, and when for cholera, yellow fever, measles, scarlatina, rötheln, diphtheria, and typhoid in man, and for strangles, glanders, influenza, brust-seuche, rabies, lung plague, Rinderpest, Texas fever and the rest in animals, we must look in the annals of the past to find their characters. The only reason why this cannot be done

now is because of the lack of public intelligence and of public interest in a thorough sanitation. The same lack of appreciation and of enlightened public spirit formerly militated against the extinction of the animal plagues in Western Europe and the British Isles, as well as on the Western Continent. Europe learned the lesson at the cost of many millions yearly, and now England and other western European nations, realize that the continued absence of lung plague, Rinderpest and sheep-pox is an abundant remuneration for a constant vigilance.

"We had our lesson in the extinction of lung plague and the restriction of Texas fever to the Southern States, but the individual State legislatures have in most cases failed to profit by this, so that rabies, tuberculosis, and glanders especially, remain as a lasting opprobrium, and an evidence of our lack of sanitary economy.

"In the field of parasitism new developments are constantly cropping out. The B. of A. I. has demonstrated in the cattle and sheep of the Southern States the ruinous *strongylus ostertagi*, and *uncinaria radiata*, and *cernua* all of which are new to our American veterinary literature. The fringed *tænia* of sheep in the West and Southwest was unknown until identified by Cooper Curtice in 1887, and is now known as causing one of the most destructive parasitisms, the general spread of which would be most disastrous. Quite recently the *paragonimus westermanni* has been found in the United States in dogs, cats and especially swine, an emigrant from Japan and the East, which may be expected to increase with the increased intercourse with the Orient, and to produce in the American the Japanese affection of parasitic hæmoptysis. Occasionally a dissatisfied physician points his appeal by quoting the outlay and vigilance of the United States, in the exclusion of animal plagues, while the plagues of man in his opinion receive too little attention. His protest against veterinary sanitation is uncalled for, and very short-sighted. The *paragonimus* is but one of many pestilential parasites which are being fixed on American humanity because liberality and vigilance in veterinary sanitary police are not yet all that they should be. This narrow professional view is rather the characteristic of the medical than the veterinary profession; let us see to it that it shall never be otherwise as far as the latter is concerned. When the medical profession as a whole shall rise to a right appreciation of comparative medicine a better day for the medicine of man will be near.

" But I must hasten to allow you to get to the excellent programme which has been provided. One subject, however, which has not found a place on the programme, may well detain us for a minute. The Schmidt treatment for parturient collapse has now met with general acceptance. It bids fair, however, to be superseded by the distention of the udder with oxygen, or even with filtered air, or with sterilized normal salt solution. Under one or other of these modes of treatment the subject usually gets on her feet in from one to three hours and makes a prompt recovery. Even the overcharging of the udder with milk, by avoiding drawing the teats, is largely protective and curative. In the Channel Islands this overstocking the udder has alone robbed the disease of its terrors. Success is so uniform under a full distension of the udder with gas or liquid, that we are furnished with a very conclusive pathological doctrine of the disease. Though occurring in plethoric cows only, it is not due to plethora alone, as that does not hinder prompt recovery. It is not due to sepsis, as it yields so readily to simple water or air used to repletion of the milk ducts and follicles. It is not infection from the womb, as it occurs mostly after easy parturitions, in which there is no opportunity for infection, and it recovers promptly without the use of an uterine disinfectant. As Gratia claimed, even before Schmidt proposed the iodide treatment, it is manifestly a mammary disease. The full distention of the mammae is the essence of the successful therapy, and this speaks strongly of the suspension of the active circulation of the active hyperaemia, and of the excessive metabolism in the udder. The compression of the capillary network of the secreting follicles by the gaseous or liquid contents is a formidable barrier to the influx of blood; the reduction of the blood supply not only checks secretion, but also the leucocytosis and metabolism, the formation of leucomains and the entrance of the latter into the general circulation. We cannot as yet say positively that the pathogenic factor is to be found in the leucomains, the ptomains, or toxins. It has been shrewdly suggested that if it were one of these poisons it could not be so promptly eliminated from the system as to allow of recovery in from one to three hours. On the other hand, it should be noted that with the prompt arrest of all further addition to the hypothetical poison, that which is present in the system may be speedily reduced below the toxic point by elimination or chemical change; and further, a noticeable activity of the bowels as a rule, quickly sets in after the distention treatment, so that we may conclude that

active elimination is precipitated. Whatever may be true as to the formation, absorption and elimination of these poisons, the results of the distention treatment are such as to border on the miraculous. In severe cases in which in time past we looked with reason for 50 or 60% mortality, we can now hope for almost uniform recovery.

"Another subject which has been near the heart of all of us, is the safeguarding of the law which regulates the practice of veterinary medicine in the State. Our committee charged with the care of this matter has not been idle. They will, I trust, tell us something of what has been done, what is now being done, and what the prospects are for the future. I have no desire to forestall their report, but I shall say this, that they need the hearty support of the united profession in the State, alike in the supply of means, in the way of coöperation in securing evidence of infringements of the law, and in a careful avoidance in their own practice of all that is not in perfect harmony with the spirit of the act. Graduates of two year colleges, who cannot legally practice in New York complain bitterly of the employment as professional assistants of men without a degree, without college training, without any systematic training in veterinary medicine. Every such breach of professional ethics on the part of the licensed practitioner can only tend to weaken the hands of our committee, and to destroy the force of our statute. Our committee has not been so fruitless as many suppose. To my knowledge unlicensed men have been driven out of practice; in cases in which the offender has not fled from the face of avenging justice, he has been cited in court to be tried at an early date; better than all perhaps, our Canadian brethren have been roused to demand for the Dominion a three years course, with pupilage, to be entered by a high school education, which will make the Canadian graduates eligible for the examinations for practice in this State. In this way our movement is bearing fruit which could scarcely have been expected. It will advance the whole profession far toward harmony and unity, for the future graduates of Canadian schools may be expected to stand with us shoulder to shoulder, and the schools of the United States must one and all come up to our New York standard, and work earnestly and with one mind for a common profession, with high aims and bright prospects. Heaven speed the day of unity, fraternity and progress."

The calling of the roll was dispensed with, the attendance being determined by a registry-book kept at the door, from

which the following names were taken :

Wm. Herbert Lowe, Paterson, New Jersey ; George W. Meyer, New York City ; George H. Berns, Brooklyn, N. Y. ; C. E. Clayton, New York City ; R. W. McCully, New York City ; T. E. Smith, Jersey City, N. J. ; Wm. F. Doyle, Brooklyn, N. Y. ; H. D. Stebbins, West Winfield, N. Y. ; E. Hanshew, Brooklyn, N. Y. ; G. T. Stone, Binghamton, N. Y. ; W. G. Dodds, Canandaigua, N. Y. ; J. F. DeVine, Goshen, N. Y. ; Alex. Findlay, Camden, N. Y. ; R. Perkins, Warsaw, N. Y. ; K. W. Cromby, Walworth, N. Y. ; S. H. Gage, Ithaca, N. Y. ; D. H. Udall, Columbus, Ohio ; G. C. Kesler, Holly, N. Y. ; H. S. Beebe, Albion, N. Y. ; E. F. Bettinger, Chittenango, N. Y. ; J. M. Taylor, Henrietta, N. Y. ; C. C. Willard, Mount Morris, N. Y. ; L. G. Moore, Trenton, N. Y. ; R. C. Hurlbut, Boonville, N. Y. ; D. P. Webster, Hilton, N. Y. ; T. G. Sherwood, 107 West 37th Street, New York City ; Wilson Huff, Rome, N. Y. ; D. M. Kellogg, Farmer, N. Y. ; F. E. Williams, Ovid, N. Y. ; Frank Hunt, Jamestown, N. Y. ; W. J. Hallock, Auburn, N. Y. ; Claude D. Morris, Binghamton, N. Y. ; T. F. O'Dea, Saugerties, N. Y. ; A. G. Wicks, Schenectady, N. Y. ; E. M. Casey, Oxford, N. Y. ; W. N. D. Bird, Buffalo, N. Y. ; W. L. Baker, Buffalo, N. Y. ; George A. Knapp, Millbrook, N. Y. ; Francis Abele, Jr., Quincy, Mass. ; N. H. Denison, Massena, N. Y. ; J. A. Genung, Ithaca, N. Y. ; Charles Cowie, Ogdensburg, N. Y. ; Otto Faust, Poughkeepsie, N. Y. ; L. R. Webber, Rochester, N. Y. ; E. E. Dowling, Syracuse, N. Y. ; L. D. Fisher, Madrid, N. Y. ; F. J. Baker, Brasher Falls, N. Y. ; F. D. Markham, Port Leyden, N. Y. ; Theodore F. Krey, New York City ; G. P. Jeffery, Elmira, N. Y. ; Yicent Ocampo, Buenos Ayres, Argentine Republic ; A. C. Baker, Marathon, N. Y. ; Chas. E. Cotton, Minneapolis, Minn. ; E. G. Britton, Franklin, Pa. ; H. Pegan, Cochran, Pa. ; R. E. Waters, Gravesend, L. I. ; Roscoe R. Bell, Brooklyn, N. Y. ; W. J. Doyle, Cazenovia, N. Y. ; Chas. Millen, Dunkirk, N. Y. ; F. G. Scammell, Tully, N. Y. ; J. A. Pendergast, Syracuse, N. Y. ; E. F. Vorhis, Owego, N. Y. ; E. W. Sunderlin, Auburn, N. Y. ; A. J. Tuxill, Auburn, N. Y. ; V. L. James, Cooperstown, N. Y. ; C. J. Spencer, Jasper, N. Y. ; O. R. Johnston, Buffalo, N. Y. ; R. C. Reed, Elmira, N. Y. ; Wallace Anthony, Scipioville, N. Y. ; J. W. Turner, Lyons, N. Y. ; W. J. Johnston, Geneva, N. Y. ; A. H. Ide, Lowville, N. Y. ; E. O. Kingman, Cortland, N. Y. ; Webster Babcock, Scott, N. Y. ; A. W. Wescott, Alfred Station, N. Y. ; W. S. Stevenson, Tyre, N. Y. ; W. H. Kelly, Albany, N. Y. ; E. C. Hunter, Scipio, N.

Y. ; T. Sidney Elston, Berkeley, Cal. ; A. L. Shaw, Mt. Upton, N. Y. ; Louis Juliand, Greene, N. Y. ; H. D. Gill, New York City ; John Kenny, Geneva, N. Y. ; James Law, W. L. Williams, P. A. Fish, G. S. Hopkins, Ithaca, N. Y.

Secretary Kelly then read the minutes of the last annual meeting, and they were approved.

The Board of Censors at its various sittings reported favorably upon the following applicants for membership, and they were unanimously elected :

Charles Millen, Dunkirk, N. Y. ; S. H. Burnett, Ithaca, N. Y. ; E. E. Dowling, Syracuse, N. Y. ; R. C. Hurlburt, Boonville, N. Y. ; Arthur L. Shaw, Mt. Upton, N. Y. ; Dennis P. Webster, Hilton, N. Y. ; Raymond C. Reed, Elmira, N. Y. ; Louis Juliand, Greene, N. Y. ; Wm. F. Doyle, Brooklyn, N. Y. ; W. P. Hanifin, New York City ; Wm. Elliot, Walton, N. Y.

The amendment to the By-Laws extending the length of the session to three days was carried.

In the absence of Dr. H. R. Ryder, his colleague, Dr. W. N. D. Bird, of the Bureau of Animal Industry, read the former's paper on "Tuberculosis in Swine," and Prof. V. A. Moore discussed and exhibited specimens of "Tuberculosis in Range Cattle on the Pacific Coast" and "The Morbid Anatomy and Economic Importance of Tuberculosis in Chickens." These subjects were thoroughly discussed on the following day, those taking part being Drs. Morris, Huff, Berns, Williams, and others, the Chair having to close the subject on account of so much time being consumed.

Dr. Bird then read his own paper, the subject of which he had changed from that announced in the programme, since it was of the same tenor as that of Dr. Ryder. His subject was "The History of the Texas Fever Quarantine Line," and it engaged the very close attention of all.

"Blood of Domestic Animals" was a somewhat preliminary report of the investigations of Dr. S. H. Burnett, his efforts being to determine the character of the blood, the number of red-blood corpuscles and leucocytes, etc., in normal blood and in pathological conditions. In veterinary literature there is very little upon the subject, so little, indeed, that the normal standard has never been set, so that morbid departures from the normal cannot be determined. In the investigations which he has undertaken it will be his aim to establish a standard as a basis for pathological study. The Doctor did not read the very carefully prepared paper which he held in his hand, but simply ex-

plained by means of charts the progress he has made. The paper itself has been placed at the disposal of the REVIEW, and it will be published as early as possible. He was thoroughly interrogated by the members, who showed good interest in these original investigations.

On Tuesday evening the members and visitors gathered in the lecture hall to listen to two papers which were to be illustrated by lantern slides, and they were well entertained and instructed for about two hours, the subjects being: "Parental Influence and the Determination of Sex," by Prof. Simon H. Gage, and "Lectures on the Spavin Group of Lameness," by Prof. W. L. Williams.

The subject of "The Control of Glanders" was a magnet, particularly for those who have recently had to combat it in the large cities, notably New York. Dr. H. D. Gill had brought with him the charts used in the testing of a great many horses with mallein, and he was a thorough believer in the curability of the disease providing the lesions have not advanced so far as to be observable by clinical examination. He of course does not believe that every reacting horse will be cured by mallein, but he does say that many horses will be cured by mallein which otherwise or without it, would break down with external lesions. He exhibited some charts showing distinct and pronounced reactions, and these same horses afterwards failed to react and were discharged as cured. He also displayed charts of well pronounced cases of glanders which failed to react both in temperature and in tumefaction, and explained that his experience had taught him that when the blood is thoroughly surcharged with the poison of glanders mallein will have no effect as a diagnostic. The views of the essayist were thoroughly concurred in by all who spoke upon the subject, many of whom took the floor half a dozen times, so interested were they in the subject. Among them were Drs. Baker, Berns, Bell, O'Dea, and Hanshew.

A large number of papers could not be presented for lack of time. They were read by title, and were turned over to the REVIEW for publication.

The election of officers for the ensuing two years resulted as follows:

President—Dr. George H. Berns, Brooklyn.

Vice-President—Dr. Charles Cowie, Ogdensburg.

Secretary-Treasurer—Dr. Wm. Henry Kelly, Albany.

Board of Censors—W. L. Williams, Ithaca; Roscoe R. Bell,

Brooklyn; H. D. Stebbins, West Winfield; Elisha Hanshaw, Brooklyn, and Wilson Huff, Rome.

For the next place of meeting there were two candidates (Brooklyn and Ithaca), the former winning, the vote standing: Brooklyn, 25; Ithaca, 23.

The clinic was, all in all, probably the best ever held in this country, and as the surgical clinic at association meetings is essentially an American institution, we believe we are safe in saying that it was the most extensive and best arranged and carried out that was ever witnessed in the world. This may be drawing it a little strong, for in the past five years there have been held many excellent clinics in various States, and many of them we have not witnessed; but we have followed the programmes very closely, and the above conclusion is our conviction. It occupied the major portion of the meeting, and the members seemed to think they could gain more knowledge in the surgery than in the lecture room. Some said: "We must see the operations; we can read the papers in the REVIEW." The Committee of Arrangements had anticipated everything, their programme working as smoothly as though it had been rehearsed. A great many major operations were performed, and a number of minor ones. We have made arrangements with Dr. Williams to furnish us with a technical account of the clinic, together with the results of the various operations, believing this will add to the interest and value of the same. This will appear in the November number.

* * *

NOTES OF N. Y. S. V. M. SOCIETY MEETING.

For the first time in the history of the Society, the rebate of two-thirds in the return railroad fare was granted to the members there being more than one hundred who secured certificates.

More than fifty remained over for the clinic. Dr. Williams had secured so much clinical material that it could not be disposed of in the allotted time; hence the third day.

Dr. Williams' new operation for the radical cure of poll-evil made a most favorable impression upon all who witnessed it, many declaring that their next bad case will be submitted to it.

After witnessing Dr. Williams' bold incisions in the poll-evil operation we were struck by a significant advertisement in the trolley car on our way to the hotel. It was that of a grocery firm, and read as follows: "We spare no pains. . . . We cut deep, and wide, and long."

Prof. V. A. Moore's exhibit of microscopic slides illustrative

of avian tuberculosis, was very instructive and much appreciated by all who examined them.

Dr. Pierre A. Fish demonstrated at the clinic the effects of various drugs upon the blood-pressure of horses. The exhibition was really an illustration of the paper read by him at Ottawa. The horse was placed upon the operating table, thoroughly chloroformed, the jugular vein and the pneumogastric nerve exposed; then a rubber tube, with a glass nozzle, attached to a sensitive recording apparatus, was applied by opening the jugular and inserting the nozzle into the vein. The normal blood-pressure was then obtained by the height of the markings upon a revolving cylinder, the rapidity of the heart-beats being indicated by the distance between the vertical markings. The drugs injected were barium chloride, atropine sulphate, and nitroglycerine, while the effects of electricity were also shown by a current directly applied to the pneumogastric nerve.

Dr. Wilson Huff, of Rome, who has occupied the post of meat and milk inspector for his city for many years, and through whose energy and zeal a most efficient system exists there, made the statement during a discussion of tuberculosis that he had seen a cow's liver affected with phthisis weighing 127 pounds. Next.

Dr. Elisha Hanshew, of Brooklyn, remarked, during the discussion of glanders, that he believes the prevalence of the disease in New York City is due to the Federal Government having sold its old army horses, soon after the close of the war, in New York, these horses being largely affected with glanders, and that the disease has never been absent there since then.

Dr. Claude D. Morris, Secretary of the State Board of Veterinary Medical Examiners, made a statement of the work of that body, the Board being virtually a part of the Society, or, at least, the Society is in a measure responsible for its acts. Many were amazed at the large amount of work which the Board has been called upon to perform, chiefly since the passage by the Legislature of the amendment permitting the licensing of any candidate upon the unanimous recommendation of the Examiners. Of course, there is no single instance where this has been done except where the candidate is a graduate of a recognized veterinary college. But many apply and bring great pressure to bear upon the Board; men without any educational claim to consideration, yet with endorsements from judges, senators, and other influential citizens, who seem not to under-

stand nor care that they are asking that the laws be set aside for purely personal consideration. One individual successfully mandamusd the Board, and another (one Harris) did likewise, but the Board is fighting to set aside the order of the court, and in this has the powerful assistance of the Attorney-General of the State. The profession should appreciate the work being done by this Board, in their behalf, in maintaining the law which it placed upon the statute books seventeen years ago.

Sharp & Smith, of Chicago, and Kny-Scheerer Co. of New York, both well-known instrument houses, had exhibits at the Ithaca meeting.

"Tallianine," the new French remedy which has recently been introduced to the veterinary profession of this country by the old-established house of Sykes & Street, of New York, was given to a number of the members for trial. Quite a number of New York veterinarians are reporting most remarkable results from its use in cases of blood contamination, as in typhoid pneumonia, purpura, etc. It is administered intravenously in 10 c.c., usually once or twice a day.

Drs. Wm. Herbert Lowe and Thomas E. Smith were in attendance as representatives of the Veterinary Medical Association of New Jersey.

Dr. Charles E. Cotton, of Minneapolis, Minn., was present as a hold-over from Ottawa, and was much in love with the clinic.

The Borough of Manhattan, New York City, was represented by Drs. Charles E. Clayton, R. W. McCully, George W. Meyer, H. D. Gill, and Thomas G. Sherwood, while the Borough of Brooklyn sent Drs. George H. Berns, Elisha Hanshew, Wm. F. Doyle, R. E. Waters and Roscoe R. Bell—making just ten from the metropolis, where there are hundreds of eligibles.

Dr. E. B. Ackerman, of Brooklyn, sent a letter of regret at his inability to be present, which was occasioned by the serious illness of one of his children, which we are glad to report as convalescent.

CANADIAN VETERINARY SURGEONS.

A well-attended meeting of Canadian Veterinary Surgeons took place in the City Hall, Ottawa, on the evening of Wednesday, September 2, 1903, the second day of the annual meeting of the American Veterinary Medical Association. The following members of the profession were present: Drs. J. F. Burnett, A. C. Young, J. M. Quinn, R. W. Tennent, J. H. Tennent, J. J. Fyle,

M. V. Gallivan, P. T. Bowlby, J. Wilson, Jas. Pickel, J. H. Wilson, J. Massie, A. W. Harris, W. W. Boucher, A. E. Morrison, F. Fisher, T. Thacker, W. Jakeman, M. G. Connoly, Geo. H. Belaire, J. L. Robertson, D. King Smith, J. Leach, S. Kennedy, T. A. Allen, G. W. Orchard, M. B. Perdue, A. D. Stewart, Wm. Dann, J. H. Engel, H. Bradshaw, L. A. Brown, Wm. Stubbs, G. W. Higginson, F. Torrance, G. M. Walrod, P. F. Butler, S. White, A. E. James, G. A. Kennedy, J. B. Hollingsworth, D. McCuaig, T. C. Young, G. A. Hay, Geo. W. Bell, T. A. Irvine, J. D. Irvine, C. W. J. Haworth, P. J. Lynchke, D. J. McKillop, W. C. McGuire, W. G. Young, Thos. Lawson, G. Howell, R. H. McKenna, R. W. Kenning, C. H. Higgins, A. E. Moore, A. H. Hall, M. C. Baker, A. Etienne, J. D. Duchene, and Professor Andrew Smith.

Dr. Rutherford was appointed Chairman, Dr. A. E. James being chosen to act as Secretary.

The Chairman opened the meeting by discussing the position of the veterinary profession in Canada with regard particularly to the question of veterinary education.

The closing of the Veterinary Faculty of McGill University having left the Ontario Veterinary College the only institution in the country devoted to the teaching of comparative medicine, it appeared necessary that something should be done by the profession to assist in raising the standard of matriculation and extending the curriculum of the latter.

The Ontario College as a teaching institution stood second to none in the English-speaking world, and there was no room for doubt that if its standard was raised so as to meet modern requirements it would soon become the leading veterinary college on the American continent. The responsibility, however, rested mainly upon the members of the profession, and it was absolutely necessary that they should unite to strengthen the hands of Professor Smith in making the necessary changes, as it was unreasonable to expect a private individual to assume all the financial risk and responsibility of the change proposed. Veterinarians ought to be placed on a better legal footing and the speaker had no doubt that if the members of the profession throughout Ontario exerted their influence at the right time and in the proper direction, their representatives would soon see the advisability of granting them the legislation required to place them on a footing similar to that occupied by the other professions. The meeting had been called for the purpose of having a friendly discussion among themselves as to what

ought to be done. The opinions expressed were open to criticism, and he trusted that many of those present would state their views. A spirited discussion was then begun in which many of those present took part.

Dr. Tennent, of London, agreed with the opinions expressed by the Chairman, and suggested the forming of a Council similar to the Medical Council of Ontario with representation on the Board of Examiners. He also suggested that a matriculation examination equal to high school entrance should be insisted upon and that the curriculum of the college should consist of three terms of not less than six months each, with a further proviso that students should spend two terms of not less than six months each with a qualified practitioner and should produce *bona fide* certificates for those terms of pupilage.

Dr. Wilson, of London, stated that the practitioners in the vicinity of that city had held a meeting and that they were unanimously in favor of the plan proposed by Dr. Tennent.

Dr. A. H. Hall, of Quebec, expressed his approval of the proposed movement. As matters now stood in his Province since the closing of McGill, the only veterinary college whose graduates were eligible to practice in Quebec was that affiliated with Laval University. He advocated a union among Canadian practitioners with the object of making the Ontario Veterinary College a first-class three-term school.

Dr. D. King Smith pointed out the difficulty of obtaining legislation and recommended friendly consultation between the members of the profession and the college authorities, with a view to adopting the best method of reaching the desired end. He advocated better organization among veterinarians, who, he claimed ought to unite their forces and work for the improvement of the existing college.

Professor Andrew Smith, of Toronto, on rising was greeted with hearty applause from the large number of veterinarians present, most of whom were graduates of the Ontario College. He was glad to meet so many of his former graduates as well as the other members of the profession present and appreciated what had been said by Dr. Rutherford and the other speakers. He was anxious to see the standing of the profession improved, but pointed out the great difficulty of obtaining the necessary legislation, as also the financial obstacles in the way of conducting a three-term school on proper lines which would be able to compete successfully with institutions claiming a high standard

but not living up to the terms on which they were supposed to be carried on.

Dr. Torrance, of Winnipeg, thought that this meeting for the discussion of veterinary matters and particularly the improvement of the standing of the profession in Canada by raising the standard of the Ontario Veterinary College, would prove a great benefit. This college had turned out a great many good men, but it was not in line with modern ideas. He also pointed out that it was hardly the thing to ask for legislation which would shut out graduates of the only English-speaking college in Canada, and suggested that it was the duty of veterinarians to rally to the support of the institution and assist in bearing the burden of its maintenance if such assistance were required.

Veterinary Major Massie, of Kingston, said that we were all agreed that something should be done for the elevation of the veterinary profession in Canada. The whole trouble was with the entrance examination, which was too low, and for this the profession was largely to blame. The entrance examination should be at least the same as that for the high school. He advocated three terms, but thought four would be better, and advised consultation with Professor Smith as to the best means of attaining the end in view. The question was, "What could be done?" and the only answer, "Make the one English-speaking college in Canada a National one and give it the hearty support of the whole profession."

It was moved by Dr. Tennent, seconded by Dr. B. F. Butler, that in the opinion of this meeting the curriculum of the Ontario Veterinary College should be extended to three terms of at least six months each with a provision for practice under a qualified veterinary surgeon between the terms.

"That a matriculation examination should be required equal to a high school entrance examination and that the majority of the Examining Board be appointed by the profession through the Ontario Veterinary Medical Association." (Carried.)

Professor Smith on being asked to express his views on the above motion, said that the matter was one requiring consideration, the requirements asked being higher than those demanded by the overwhelming majority of the other veterinary colleges on the Continent. He recommended careful consideration of the whole matter, at he did not think it was the desire of the profession to handicap a Canadian college in favor of outside institutions.

It was moved by Dr. Tennent, and seconded by Dr. B. F. Butler, that a committee of three be appointed to confer with Dr. Smith on the above resolution. (Carried.) Drs. Rutherford, Allen, of Brockville, and Tennent were nominated and elected to form the committee above mentioned.

Before the meeting adjourned the Chairman alluded to the great benefit which the profession would derive from the meeting in Canada of the American Veterinary Medical Association and mentioned the liberal contributions toward entertaining the visitors which had been received from Professor Smith, the Manitoba Veterinary Association, the Ontario Veterinary Medical Association, the Central Canada Veterinary Association and the Dominion Government.

Moved by Dr. C. H. Higgins, Ottawa, seconded by Dr. Boucher, that the minutes of this meeting be prepared for publication and sent to the AMERICAN VETERINARY REVIEW, *The Journal of Comparative Medicine and Veterinary Archives*, the *Farmer's Advocate*, *Nor' West Farmer* and the daily press of Ottawa. (Carried.) The meeting then adjourned.

A. E. JAMES, *Secretary*.

THE MISSOURI VETERINARY MEDICAL ASSOCIATION.

The twelfth annual meeting was held in Windsor, Missouri, August 17 and 18, 1903. The following members and visiting veterinarians were present: Drs. R. Logan Allen, Horace Bradley, M. E. Bradley, J. W. Connaway, Chas. Doerrie, D. W. Eliot, C. H. Gaines, H. B. Hallenberger, C. A. Hadsell, H. A. Johnson, L. M. Klutts, B. F. Kaupp, C. A. Krause, A. D. Knowles, D. F. Luckey, M. McNally, F. P. McNally, W. J. McAninch, P. B. Maupin, O. J. Phillips, G. A. Roberts, Stanley Smith, J. Harvey Slater, S. Stewart, T. E. White, Walter Warren, and many others.

At 10 o'clock A. M., Monday, August 17, the meeting was called to order, and an address of welcome was delivered by Mr. A. W. Squires, Mayor of Windsor, response by Dr. S. Stewart, of Kansas City.

The President's annual address was then delivered by the President, Dr. D. F. Luckey.

The following papers were then presented: "Prepartum Vulvo-vaginal Hematoma Occurring in Mares," by Dr. J. W. Connaway, of Columbia. This paper was interesting and in-

structive and brought out a good discussion. The doctor exhibited some interesting photos of cases. The next paper on the programme was "Glanders," by Dr. V. J. Andre, of Ste Genevieve, followed by the report of an interesting case by Dr. Chas. Doerrie, of Boonville. The case in question was one of lameness and had been exhibited at a previous meeting, held in St. Louis, and was interesting to those who had seen the case to know its outcome. The next paper, an interesting case in practice, by Dr. J. Harvey Slater, of Richmond, was interesting, especially to country practitioners, it being a history and report of a case in a stallion of his inability to properly perform his duties as a stud. After the closing of the discussion of this paper many interesting cases were reported. The meeting adjourned to luncheon at 12.30 P. M.

At 1.30 P. M. a clinic was held at Dr. Horace Bradley's veterinary hospital. There was an abundance of clinical material. Among the operations performed was peroneal tenotomy, by Dr. G. A. Roberts; operation for scrotal hernia in a pig, by Dr. D. F. Luckey; oöphorectomy in a bitch, by Dr. Walter Warren. The clinic was an interesting one, consisting of a variety of pathological conditions, and lasted until 5 o'clock P. M.

At 6 P. M. a banquet was royally served by the ladies of Windsor under the direction of the committee on local arrangements. Dr. L. M. Klutts, of Clinton, acted as toastmaster.

Among the many who responded to toast was Mayor A. W. Squires, of Windsor, who gave an interesting talk on the resources of Missouri; followed by Dr. J. W. Connaway of the State Experiment Station of Columbia. Dr. D. F. Luckey, State Veterinarian, gave a few remarks on "The Veterinarian, Past and Present." Dr. S. Stewart, Dean of the Kansas City Veterinary College and President of the American Veterinary Medical Association, gave an interesting talk upon the subject of the workings of the A. V. M. A. Dr. B. F. Kaupp, of the inspection division of the U. S. Department of Agriculture, "Helminthology"; Dr. G. A. Roberts, of the Experiment Station of North Carolina, and many others made interesting comments.

The evening session opened at 7.30 P. M. The business meeting was first on the programme. The President appointed Drs. J. W. Connaway and L. M. Klutts on the Committee on Elections in the place of absent members. Also Drs. L. M. Klutts and Stanley Smith upon the Executive Committee in the place of absentees. Upon a motion, which was seconded and carried, the roll-call was suspended, and the Secretary

made note of those present. The minutes of the last meeting were read and accepted.

The Secretary then presented the following names, who were duly vouched for and approved by the Committee on Elections: Drs. O. J. Phillips, Holden; J. Harvey Slater, Richmond; H. B. Hallenberger, Hannibal; Walter Warren, Windsor; C. A. Krause, Salisbury; F. L. Kampschmidt, Liberty; Geo. Nichols, Kansas City. Dr. J. W. Connaway moved that the Secretary cast the vote of the Association for the seven veterinarians named to become members of the Association; seconded and carried.

Dr. Connaway then moved that the resolutions drawn up and adopted at St. Louis in 1902 be readopted. Seconded and carried. The resolutions follow:

"WHEREAS, The A. V. M. A. has established the precedent of holding meetings in cities where national and international fairs are held; and

"WHEREAS, An international fair will be held in St. Louis in 1904; and

"WHEREAS, No meeting of the A. V. M. A. has been held in the State of Missouri; and

"WHEREAS, The foregoing circumstances make St. Louis the logical city for holding the Association's meeting in 1904; Therefore be it

"*Resolved*, That the Missouri Veterinary Medical Association now in session invite the American Veterinary Medical Association to meet in St. Louis in 1904."

Dr. J. W. Connaway then moved that Dr. B. F. Kaupp draw up resolutions of thanks to the veterinarians of Windsor; seconded and carried.

The resolutions follow:

"*Resolved*, That the Missouri Veterinary Medical Association, now in session, tenders its sincere thanks to Drs. Bradley and Warren and others on the committee on local arrangements and to the ladies and other citizens of Windsor for their generous hospitality shown us while in their city."

The election of officers followed, with the following results:

President—Dr. B. F. Kaupp, Kansas City.

Vice-President—Dr. Horace Bradley, Windsor.

Secretary-Treasurer—Dr. S. Smith, Columbia.

Dr. Chas. Doerrie then moved that the time and place of the next meeting be left to the officers of the Association and Executive Committee. Seconded and carried.

The following papers were then presented: "Amputation of a Diseased Penis in the Ox," by Dr. Horace Bradley. Dr. Bradley illustrated his paper by exhibiting the amputated portion of the penis; followed by a report of an interesting case of tuberculosis by Dr. R. Logan Allen. "Caseous Lymph-Adenitis in Sheep," by Dr. B. F. Kaupp; "Different Forms of Hernia and Treatment," by Dr. Walter Warren. The doctor went into details, discussing the various forms of hernias and operations most successful in his practice. The papers brought out good discussions, which were enjoyed by all, the courtesies of the floor being extended to the visiting veterinarians, after which many interesting cases were reported.

At 12 o'clock, midnight, the meeting adjourned to convene in 1904 at the call of the officers of the Association and Executive Committee.

The appointments of the committees by the President-elect for the coming year are as follows:

Executive Committee.—Drs. S. Stewart, chairman; M. McNally, T. J. Menestrina.

Committee on Elections.—Drs. J. W. Connaway, chairman; Walter Warren, Chas. Doerrie.

Committee on Ethics.—Drs. D. F. Luckey, chairman; L. M. Klutts, T. E. White.

At 8 A. M. Tuesday, August 18th, the party proceeded to Sedalia, where an enjoyable day was spent at the State Fair, ending one of the most successful meetings in the history of the Association.

B. F. KAUPP, *Secretary*.

MISSOURI VALLEY VETERINARY ASSOCIATION.

The thirty-sixth regular and ninth annual meeting was held in the Y. M. C. A. building, St. Joseph, Mo., June 20, 1903.

The meeting was called to order by the President, Dr. L. D. Brown, of Hamilton, Mo., with the following members and visiting veterinarians present: Drs. L. D. Brown, Hamilton, Mo.; A. T. Peters, W. A. Thomas, Lincoln, Neb.; F. F. Brown, W. R. Cooper, B. F. Kaupp, S. Stewart, Kansas City, Mo.; J. W. Chenoweth, Albany, Mo.; C. E. Steel, E. J. Netherton, Raymond Johnson, X. I. Richmond, L. B. Huff, F. C. McCurdy, St. Joseph, Mo.

After roll-call the minutes of the last meeting were read and approved.

It being the annual meeting, the election of officers was next in order, which resulted as follows:

President—Dr. F. F. Brown, Kansas City, Mo.

First Vice-President—Dr. C. E. Steel, St. Joseph, Mo.

Second Vice-President—Dr. Chas. Saunders, Eldorado, Kan.

Secretary-Treasurer—Dr. B. F. Kaupp, Kansas City, Mo.

Drs. L. D. Brown, Hamilton, Mo.; V. Schaefer, Tekamah, Nebr.; H. V. Goode, St. Joseph, Mo.; R. C. Moore, Kansas City, Mo.; C. B. McClelland, Lawrence, Kans., were elected Censors.

Following the election of officers the meeting proceeded to the presentation of papers.

Dr. F. F. Brown presented the subject of "Treatment of Quittor"; advocating the removal of part of the hoof and perhaps the lateral cartilage; his remarks led to a spirited discussion.

Dr. A. T. Peters read a paper on "How Can Veterinarians Secure Recent Veterinary Literature?" which was discussed by several members.

Dr. C. E. Steel gave a graphic description of his experience in the South African horse traffic; it proved an interesting paper and called forth a general discussion.

Dr. S. Stewart gave the history of several cases of tumors and cancers in dogs, horses and cattle, and exhibited interesting photographs illustrating same. Drs. Peters, Cooper, Chenoweth, Thomas, Kaupp and McCurdy contributed to the discussion.

The next quarterly meeting will be held in Kansas City in October during the American Royal Cattle Show and The Kansas City Horse Show. S. STEWART, *Acting Secretary*.

CONNECTICUT VETERINARY MEDICAL ASSOCIATION.

The semi-annual meeting was held in New Haven, Tuesday, August 18th, 1903, at Dr. Edward C. Ross' Veterinary Hospital, with the following members and visitors present: Members—E. C. Ross, H. Whitney, F. G. Atwood, J. H. Kelley, G. W. Loveland, J. L. Devereau, Thos. Bland, P. T. Keeley, J. H. Gardner, F. F. Bushnell, L. B. Judson, G. T. Crowley, F. S. McGuire, J. F. Lachen, H. E. Bates, E. M. Beckley, C. R. Witte, J. E. Underhill, C. E. Dornheim, B. K. Dow and F. A. Ingram. Visitors—W. H. Carley-Baker, New York City; H. N. Hall, New Haven; H. L. Tomer, Norwich; W. H. Elliott, M. D., Manila, P. I.; R. S. Todd, New Milford; H. C. Balzer, Meriden, and S. S. Treadwell, Englewood, N. J., delegate from the New Jersey State Association; also, Veterinary Student F. H. Burt, Adams, Mass.

The first part of the programme was the surgical clinic at 10.30 A. M.

(1) Bay mare, lame in right fore extremity; presented for examination and diagnosis.

(2) Bay horse, lame in right hind extremity, leg persistently flexed and resting on toe; presented for examination and diagnosis.

(3) Bay mare, chronically lame in right hind extremity; presented for examination and diagnosis.

(4) Ovariectomy, mare, by Dr. Thos. Bland. After making the incision through the vagina and securing one ovary in the ecraseur, the doctor invited all who desired to pass their hand into the peritoneal cavity and examine the ovaries in position before removal. Most of those present made an examination.

(5) Castration of four-year-old stallion, standing, by Dr. McGuire. This was a difficult case, owing to one testicle being drawn up to the inguinal canal, but the operation was quickly and expertly performed.

(6) Setter dog, badly emaciated, with curvature of the spine; presented for examination. History—The dog had been run over by a heavy wagon three months previously. The dog was chloroformed to death, and Dr. Dornheim made post-mortem examination, finding the last dorsal and the first two lumbar vertebræ fractured and ankylosed.

(7) and (8) Ovariectomy, two bitches, performed by Dr. Bushnell without anæsthesia.

Other subjects were for neurectomy operations. Dr. Bland performed two median neurectomy operations without anæsthesia. Dr. Atkins performed one median and ulnar, also one sciatic and peroneal neurectomy operations, at the same time explaining the technique of the operations.

Dr. Ross had in his hospital cases of sickness, injuries, etc., which all were allowed to see.

After the clinic a trip by trolley car was taken to West Haven, where at 4 o'clock P. M. the members and their visitors sat down to a well-prepared shore dinner, which was greatly enjoyed by all.

After the banquet, a short business meeting was held, with the President, Dr. Whitney, in the chair, Dr. Ross acting as Secretary *pro tem*.

Drs. R. S. Todd, C. E. C. Atkins, H. L. Tomer, and W. H. Carley-Baker were admitted as members.

There was a general discussion of the subjects of azoturia

and scrotal hernia. Drs. Bland, Kelley, Gardner, Ingram and Loveland took an active part in the discussion.

A vote of thanks was tendered the Committee of Arrangements for the excellent clinic provided for the association; also, a vote of thanks was tendered Dr. Atkins for services in demonstrating the various neurectomy operations.

The hour getting so late, the meeting was adjourned.

The meeting was a record-breaker for the Association. The clinic proved to be a strong feature of the meeting. As soon as one operation was performed, another subject was ready for the operator, and some of the time two operations were in progress at the same time. All the operations were well performed and elicited much applause. Every one present appeared to take a keen interest in the various operations, and expressed themselves as highly pleased with the clinic and entertainment, so generously provided for them by the Committee of Arrangements, composed of Drs. Ross, Whitney and Kelley. Another feature was the harmony and good feeling which seemed to prevail among the veterinarians present.

B. K. Dow, *Secretary*.

NEWS AND ITEMS.

DR. EDWIN VREELAND, veterinarian, of Jersey City, N. J., is City Marshal of his city.

DR. T. EARLE BUDD, of Orange, New Jersey, member of the Essex Troop, made a very creditable score at the recent rifle practice of that Troop at Sea Girt.

CORNELIUS VAN RIPER, of Orange County, N. Y., has through the blow of a cow's tail lost the sight of one eye, and it is feared will lose the other. He was milking the cow, when she switched her tail quickly, striking him in both eyes. It is believed the cow's tail had come in contact with a poisonous weed. Particles of this were transferred to the farmer's eyes, causing them to become inoculated.

CONTAGIOUS ANIMAL DISEASES IN FLORIDA.—The last Legislature of Florida clothed the University of Florida with the authority to investigate, treat, and stamp out contagious diseases among domestic animals in the State, giving them all the powers that the State Board of Health has in investigating and caring for contagious diseases among humans. Dr. C. F. Dawson, professor of veterinary science in the University, has been

employed as agent to carry into effect the provisions of the law.

THE GOVERNMENT HORSE BOOK.—The "Special Report on Diseases of the Horse" has been revised under a joint resolution of the 57th Congress, is now in press, and will soon be issued. This report was prepared under the direction of the Bureau of Animal Industry of the United States Department of Agriculture, and was first issued in 1890 and the limited edition that the Department was able to publish was soon exhausted. The demand was then turned on Congress, and that body has from time to time ordered reprints for distribution by its own members exclusively, until the number already issued has reached nearly half a million copies. The resolution under which the present revision was made provides for the printing and binding in cloth of 200,000 copies, the same to be first revised and brought up to date under the supervision of the Secretary of Agriculture; 128,000 copies for the use of the House of Representatives, 64,000 copies for the use of the Senate, and 8,000 copies for the use of the Department of Agriculture. The allotment to the Department is so small that it will have none for general distribution, and those who may desire copies of the report should apply to members of the last Congress (the 57th) to whom all copies of the Congressional allotment will be delivered. New members of the present Congress will not be entitled to a quota. The report has been carefully revised either by the authors of the several articles or by Veterinarians of wide reputation. An entirely new article on "The Examination of a Horse," by Dr. Leonard Pearson, State Veterinarian of Pennsylvania, is included; also a chapter on shoeing, written by Dr. J. W. Adams, professor of surgery and lecturer on shoeing, Veterinary Department, University of Pennsylvania. The report also contains the following articles: Methods of Administering Medicines, Diseases of the Digestive Organs, and Wounds and their Treatment, by Ch. B. Michener, V. S.; Diseases of the Urinary Organs, Diseases of the Generative Organs, Diseases of the Eye, and Diseases of the Skin, by James Law, F. R. C. V. S.; Diseases of the Respiratory Organs, by W. H. Harbaugh, V. S.; Diseases of the Nervous System and Diseases of the Heart, Blood Vessels, and Lymphatics, by M. R. Trumbower, V. S.; Lameness, by A. Liautard, M. D., V. S.; Diseases of the Fetlock, Ankle, and Foot, by A. A. Holcomb, D. V. S.; General Diseases, by Rush Shippen Huidekoper, M. D., Vet.; and Surra, by Ch. Wardell Stiles, Ph. D. It is illustrated by 41 plates and 18 text figures.

OUR PRECAUTIONS AGAINST THE IMPORTATION OF TUBERCULOUS CATTLE.—The vigilant chief of our Bureau of Animal Industry, Dr. Salmon, has recently made a report entitled "The Tuberculin Test of Cattle in Great Britain." The United Kingdom is the source of most of our imported thoroughbred cattle, and it is manifest from the report that during the last few years the Bureau's scrutiny has saved us from importing many a diseased animal. Since December 1, 1900, the tuberculin test has been applied in Great Britain by a medical officer of the Bureau. The Canadian Government has also had an inspector charged with the same kind of work in Great Britain, and an arrangement was made between the United States and Canada for each Government to accept the certificates of the other's inspector. It would appear, however, that it is not perfectly safe to rely solely on testing the cattle before they are shipped, for Dr. Salmon states that there has been evidence sufficient to cause a strong suspicion that in some instances fraudulent means were being used for the purpose of defeating the test in diseased herds, such as injecting tuberculin in advance of the official test, so as to prevent a reaction, or administering drugs to resist a rise of temperature. But it is not the British exporter alone who has opposed the Bureau's regulations or sought to baffle its vigilance. The principal opposition at home, according to the report, has come from comparatively few persons interested in the importation and sale of breeding stock. "Some have even been dissatisfied because they were not permitted to import animals which had reacted to the test or which came from herds known to be badly diseased." Of course, they did not desire to introduce diseased cattle into their own herds; they were simply out-and-out tradesmen, and it was their purpose to buy diseased animals cheap in Great Britain and sell them at a profit to their own countrymen, our countrymen. We quite agree with Dr. Salmon when he says that the facts shown in his tables are sufficient to demonstrate to any fair-minded person that the Bureau's regulations are not unreasonable or unduly severe, but are necessary for the protection of the herds of the United States. The cattle of Great Britain seem to be contaminated with tuberculous disease to a very dangerous degree. Whereas cattle bred in the Channel Islands are practically free from the disease, they readily contract it in many instances after they have been taken to Great Britain. It is plain that we cannot afford to relax our vigilance in the matter of excluding diseased cattle.—(*N. Y. Phil. Med. Journ.*, Sept. 5.)

ing
As
th
zat
tha
to
of
he

Amer
Vet.
Conn

New
Schu

Passa

Texa
Mass
Main
Iowa
Centr
Mich
Alum
Illino

Wisc
Illino
Vet.
North
Ontar

V. M

Ohio

West

Misso
Gene

Iowa
Minn
Penn

Keyst

Color
Misso
Rhod

VETERINARY MEDICAL ASSOCIATION MEETINGS.

In the accompanying table will be found the dates, places of meeting, and Secretaries' names and addresses of all the Veterinary Medical Associations of the United States and Canada, so far as obtainable by the REVIEW. Secretaries are urgently requested to see that the organizations which they represent respectively are included in the list, and that the details concerning them are properly stated. We shall be glad to receive notification of errors of commission and omission, to the end of making this department absolutely without fault, and thus a great help to the profession and the cause of veterinary science.

Name of Organization.	Date of Next Meeting.	Place of Meeting	Name and Address Secretary.
American V. M. Ass'n.....	August, 1904.	.....	J. J. Repp, Phila., Pa.
Vet. Med. Ass'n of N. J.	Jan. 9, 1904.	Trenton.	G. W. Pope, Athenia, N. J.
Connecticut V. M. Ass'n.....	.....	.....	B. K. Dow, Willimantic, Conn.
New York S. V. M. Soc'y....	September, 1904	Brooklyn.	W. H. Kelly, Albany, N. Y.
Schuykill Valley V. M. A....	3d Wednesday in December.	Reading.	W. G. Huyett, Wernersville, Pa.
Passaic Co. V. M. Ass'n.....	1st Tuesday of each month.	Paterson, N. J.	W. G. Fredericks, Delawanna, N. J.
Texas V. M. Ass'n.....	.....	.....	H. D. Paxson, Ft. Worth.
Massachusetts Vet. Ass'n.....	Monthly.	Boston.	F. J. Babbitt.
Maine Vet. Med. Ass'n.....	.....	.....	C. L. Blakely.
Iowa-Nebraska S. V. M. Ass'n.	.....	.....	.....
Central Canada V. Ass'n.....	.....	Ottawa.	C. H. Higgins, Ottawa, Can.
Michigan State V. M. Ass'n...	.....	.....	Judson Black, Richmond.
Alumni Ass'n N. Y.-A. V. C..	April, 1904.	141 W. 54th St	F. R. Hanson, N. Y. City.
Illinois State V. M. Ass'n.....	Dec. 2 and 3, '03	Sherm'n H'se, Chicago.	W. H. Welch, Lexington, Ill
Wisconsin Soc. Vet. Grad.....	Call of Pres't.	Racine.	S Beattie.
Illinois V. M. and Surg. A....	.....	.....	W. A. Swain, Mt. Pulaski, Ill
Vet. Ass'n of Manitoba.....	.....	.....	F. Torrance, Winnipeg.
North Carolina V. M. Ass'n...	.....	.....	J. W. Petty, Greensboro.
Ontario Vet. Ass'n.....	.....	.....	C. H. Sweetapple, Toronto, Can.
V. M. Ass'n New York Co....	1st Wednesday of each month.	141 W. 54th St	C. E. Clayton, N. Y. City.
Ohio State V. M. Ass'n.....	.....	.....	W. H. Gribble, Washington C. H.
Western Penn. V. M. Ass'n...	1st Wednesday of each month.	Pittsburgh.	F. Weitzel, 100 Parkway, Allegheny.
Missouri Vet. Med. Ass'n.....	1904	Call of Officers	B. F. Kaupp, Kansas City.
Genesee Valley V. M. Ass'n...	.....	.....	W. E. Stocking, Medina, N. Y.
Iowa State V. M. Ass'n.....	Call of Pres't	Des Moines.	J. J. Repp, Ames, Iowa.
Minnesota State V. M. Ass'n..	Jan. 21, 1904.	St. Paul.	J. S. Butler, Minneapolis.
Pennsylvania State V. M. A...	March, 1904.	Philadelphia.	C. J. Marshall, 2004 Pine St., Phila.
Keystone V. M. Ass'n.....	2d Tuesday of each month.	Philadelphia.	C. J. Marshall, 2004 Pine St., Phila
Colorado State V. M. Ass'n...	.....	.....	M. J. Woodliffe, Denver.
Missouri Valley V. Ass'n.....	October, 1903.	Kansas City.	B. F. Kaupp, Kansas City.
Rhode Island V. M. Ass'n....	January, 1904.	Providence.	T. E. Robinson, Westerly, R I

PUBLISHERS' DEPARTMENT.

Subscription price, \$3 per annum, invariably in advance; foreign countries, \$3.60; students while attending college, \$2; single copies, 25 cents.

Rejected manuscripts will not be returned unless postage is forwarded.

Subscribers are earnestly requested to notify the Business Manager immediately upon changing their address.

Alex. Eger, 34 East Van Buren St., Chicago, Ill., Veterinary Publisher and dealer in Veterinary Instruments, Books, and Drugs, is the authorized agent for the REVIEW in Chicago and the Middle West, and will receive subscriptions and advertisements at publishers' rates.

OUR readers will profit by a very careful perusal of our advertising pages, which, while always interesting, are especially attractive this month in what they offer for inspection. It will also be noted, that several *new* advertisements appear with this month's issue, well worth looking into. The advertisements at the foot of this page, which are transient, new ones appearing each month, are never passed over without arousing interest, judging from the number of replies to them that pour into this office. This month, they should arouse more than a usual interest, from the fact that the practice that is offered for sale shows an excellent investment for the amount of money asked, and the instruments advertised by the other party, are being sold to help the widowed sister of one of our departed brothers in the profession, the late Dr. E. F. Alexander, Hoosick Falls, N. Y.

ENDORSEMENT

from

Dr. Ward Green, V. S., of High Point, N. C.

ZENOLEUM is the best disinfectant and antiseptic I have ever used and to be without it is like operating without instruments. I have been familiar with your goods for over two years and it is a sure money maker for me, and I always keep a supply on hand.

Wishing you all the success you justly deserve by putting such a good article as Zenoleum on the market, I remain,

Yours sincerely,

DR. WARD GREEN, V. S.

PRACTICE FOR SALE.

In Iowa, paying over \$300 per month, no competition, price \$500, will stand investigation. Address "Practice," care of REVIEW, 509 W. 152d St., New York.

VETERINARY INSTRUMENTS FOR SALE.

FOR SALE, THE VETERINARY INSTRUMENTS AND EQUIPMENT of the late Dr. E. F. Alexander, of Hoosick Falls, N. Y.

For particulars address: C. F. W. SMITH (Druggist), Hoosick Falls, N. Y.

WANTED, Position as assistant to practicing veterinarian. Address GRADUATE, P. O. Box 5000, Bellport, N. Y.